

# AUTO CALL<sup>®</sup>

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## JULY 1993



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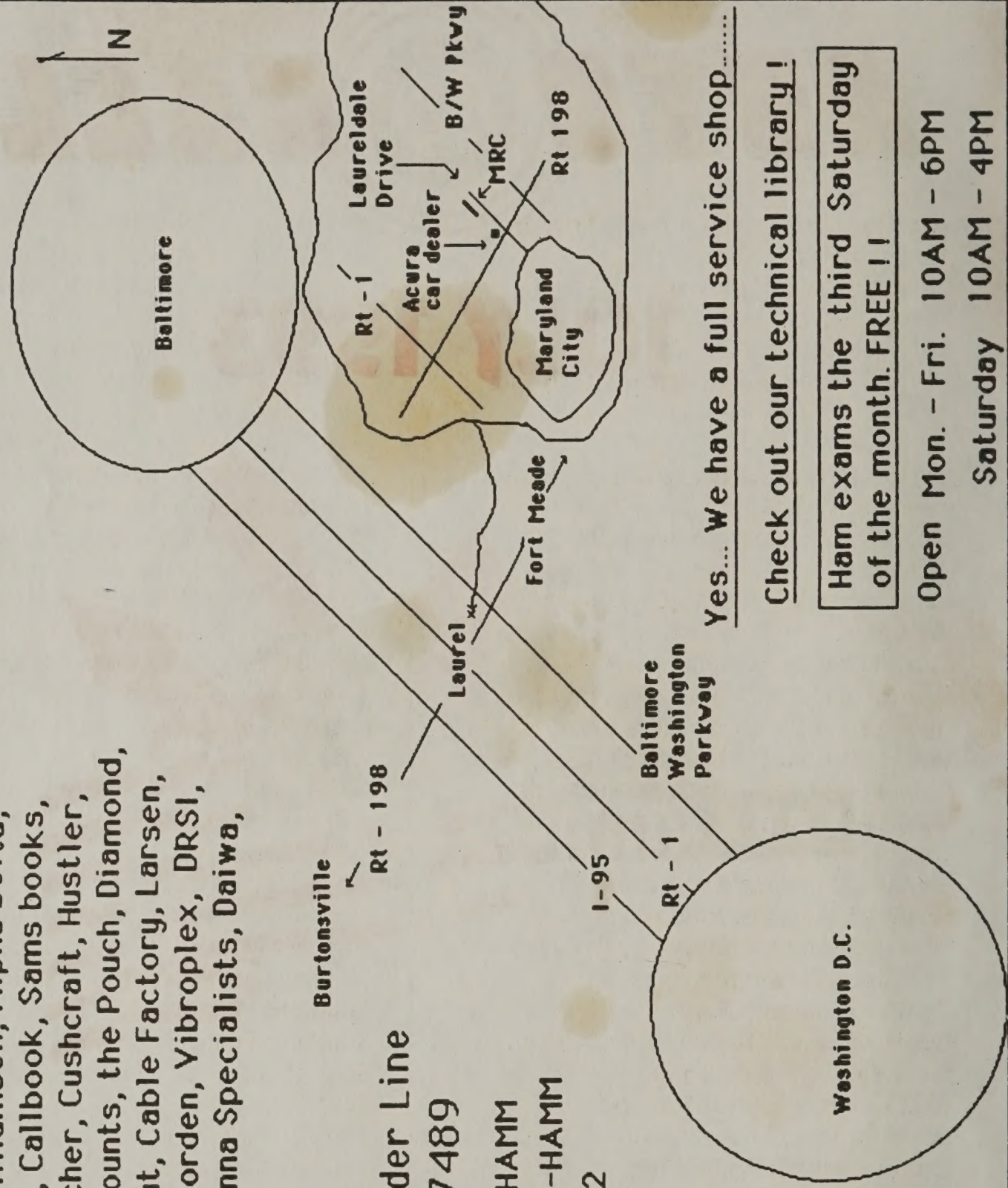
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Anne Arundel Radio Club  
AMSAT-Radio Amateur Satellite Corporation  
Antietam Radio Association, Inc  
ARINC Amateur Radio Club  
Arlington Amateur Radio Club Baltimore  
Amateur Radio Club  
Baltimore Amateur Radio Club  
Baltimore Radio Amateur Television Society  
Capital City Amateur Radio Society  
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Carroll County Amateur Radio Club  
Central Maryland Amateur Radio Club  
Chaverim of the Greater Washington Area  
Columbia Amateur Radio Club  
Culpeper Amateur Radio Association  
D-MARC - Digital MidAtlantic Radio Council  
Department of State Amateur Radio Club  
Fauquier Amateur Radio Club  
Frederick Amateur Radio Club  
Frederick Amateur Repeater Group  
Friendship Amateur Radio Club  
Goddard Amateur Radio Club  
Green Mountain Repeater Association  
Herndon Repeater Group  
IBM Amateur Radio Club  
John Hopkins University APL ARC  
Laurel Amateur Radio Club  
Leisure World Amateur Radio Club  
MADRAS  
Maryland Emergency Phone Net  
Maryland FM Association  
Maryland Mobileers Amateur Radio Club  
Mercury Amateur Radio Assn., NE Area  
Metropolitan Communications Network

Mid-Atlantic DX & Repeater Assn.  
Montgomery Amateur Radio Club  
Montgomery Auxiliary Communications Service  
Moose Amateur Radio Club  
Mount Vernon Amateur Radio Club  
National Capitol DX Association  
Naval Research Laboratory Radio Club  
Northern Virginia FM Association  
Northern Virginia Radio Club  
Ole Virginia Hams Amateur Radio Club  
Pentagon Amateur Radio Club  
Potomac Area VHF Society  
Potomac Valley Radio Club  
Prince George's Wireless Association, Inc.  
Prince George's County ARES/RACES  
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    Del-Mar-VA Chapter #150  
    Shenandoah Valley Chapter #137  
    Vic Clark Chapter #91  
    Washington Chapter #23  
Rock Creek Amateur Radio Association  
St. Mary's County Amateur Radio Association  
Shenandoah Valley Amateur Radio Club  
Southern Maryland Amateur Radio Club  
Southern Patuxent Amateur Radio Club  
Springfield Estates Elementary School ARC  
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Sterling Park Amateur Radio Club  
Summit Amateur Radio association  
Tri-County Amateur Radio Club  
T-MARC, Middle Atlantic Repeater Council  
Vienna Wireless Society  
Voice of America Amateur Radio Club  
Washington Adventist Amateur Radio Assn.  
Washington Area Young Ladies ARC  
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# AUTO-CALL

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## COMING EVENTS - 1993

June 26-27	Field Day
July 3	Murgas ARC - Wilkes Barre, PA
July 3-4	ARRL West VA State Convention - Jackson's(Weston)VA
July 4	Harrisburg RAC - Bressler, PA
July 9-11	XLRL National Convention - Wichita, KS
July 11	Summit ARA - Westminster, MD
	North Hills ARC - Pittsburg, PA
	Genesee RA - Alexander, NY
July 17	AMSAT - Semi-Annual Meeting
	Skanfest - Skaneateles, NY
July 17-18	Southeastern Division Convention - Atlanta, GA
July 24	Utica ARC - Frankfort, NY
	Jonestown Mtn. Repeater Assn. - Huntington Mills, PA
July 25	BRATS - Timonium, MD
	Indiana County ARC - Indiana, PA
August 1	Shennandoah Valley Hamfest - Berryville, VA
August 8	Mid-Atlantic ARC - Warrington, PA
August 14-15	ARRL National Convention - Huntsville, AL
August 15	Delaware-Lehigh ARC - Easton, PA
	Delmarva - Georgetown, DE
August 21	Fingerlakes/Tompkins Co. ARC - Ithaca, NY
August 22	Moose ARC Hamfest - Towson, MD
August 29	Southern Patuxent Hamfest - Upper Marlboro, MD
	PROS - Chaffee, NY
	Gloucester Co. ARC - Mullica Hill, NJ
September 4-5	Shelby Hamfest - Shelby, NC
September 11	Radio Assn. of Erie - Erie, PA
September 12	F.A.R.Fest 93 - Gaithersburg, MD
	Butler County ARA Hamfest - Butler, PA
September 18	Buffalo Hamfest - Hamburg, PA
	Columbia-Montour ARC - Berwick, PA
September 19	South Jersey Radio Assn. - Pennsauken, NJ
September 25	Elmira, NY
September 25-26	York, PA

### Conventions & Conferences

August 7 - Traffic Handlers Picnic at W2MTA - Newark Valley, NY  
 August 14-15 - ARRL National Convention - Huntsville, AL  
 October 2 - Mid-Atlantic VHF Conference - Location TBA

*Thanks to Hugh Turnbull- W3ABC and Bob Milligan - KI4MB for providing much of the above information. Please send a copy of your Hamfest flyer to AUTO-CALL and keep us advised of any changes. We are anxious to provide our readers with timely information and help to avoid possible conflicts when scheduling activities.*

*We can use all the help we can get!*



## THE NEW GENERATION ROTATORS

THEY'RE NOT YOUR FATHER'S HAM "M"

Rotator Comparison Chart

	The New Generation									Old Generation	
Model/Specs	Create RCS	Create RC5A	Create RC5B	Emoto 105TSX	Emoto 747SRX	Emoto 1105MSX	Emoto 1200FOX	Emoto 1300MSAX	Emoto 1800FSX	Telex HamIV	Telex TZK
Rotate Torque Ft/Lb	43	116	160	37	50	57	143	215	287	67	83
GD <sup>2</sup> Right And Inertia	N/A	N/A	N/A	100	400	700	1000	1800	3000	N/A	N/A
Bolt Static Torque Ft/Lb	506	1085	1450	215	502	717	1290	1792	2150	417	750
Wind Load in Tower (ft)	10	25	25	11	22	27	27	33	36	15	20
Mast Mount	4	5	7	5	9	12	12	15	16	7.5	10
Rotating speed 360°	60-150 sec variable	60-150 sec variable	60-150 sec variable	55	35	65	40	77	80	60	60
Reverse Delay	None	2 sec	3 sec							None	None
Preset	Opt 3	Opt 3	yes	no	no	Opt	yes	yes	yes	no	no
Computer	no	no	no	no	yes	yes	yes	yes	yes	no	no
Power 120V 60Hz	80VA	140VA	200VA	70VA	70VA	70VA	90VA	120VA	150VA	25V AC	25V AC
Mast Dia	2-2.5 in	2-2.5 in	2-2.5 in	2-2.4 in	1.6-2.4 in	1.6-2.4 in	1.6-2.4 in	2.4-3.1 in	3.9-5.5 in	2 in	2 in
Control wire	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	8 cond	8 cond
Vertical	880	1540	1540	860	1100	880	1760	1760	2200	400	800
Mast Load #											
Motor size	13	17	20	15	9	11	11	13	39.5	24	28
Drive type	worm drive	worm drive	worm drive	disk	friction	friction	friction	friction	friction	wedge	wedge
Self center mast clamp	yes	yes	yes	Adj	Adj	Adj	Adj	Adj	Adj	no	no
Special notes	3-6	3-6	3-6	6	1-6	6	2-6	6	6	4-7	4-7
Price (\$)	\$269.00	\$449.95	\$799.00	\$209.95	\$399.00	\$69.00	\$79.00	\$109.00	\$272.00	\$369.95	\$439.95
With Preset	\$379.00	\$528.95				\$663.00					

Notes

1. Turns Transfer 470° in 36 seconds  
4. TZK and HamIV have same motor and gear train parts  
5. 120V normal 220V special order

2. Variable speed 40 sec max  
3. EEB prices as of 5/91 subject to change  
6. Wind Load in Sq. Feet

3. Variable speed w/SCR constant rotational torque at any speed  
6. 120/220 rated transformer

### THE NEW GENERATION

An entire generation of amateurs have grown up knowing only one rotator manufacturer. Those old favorites are still popular. But, now a new generation of rotators are out to set high standards with innovative features such as: large machined steel gears, cast and machined aluminum cases, solid state controllers for smooth start/stop, preset, computer control and circular position indicators.

The bottom line is... strong, long term reliability, ease of operation and cost effectiveness. When you erect an antenna system the last thing you need is rotor problems!

### CREATIVE DESIGN ROTATORS

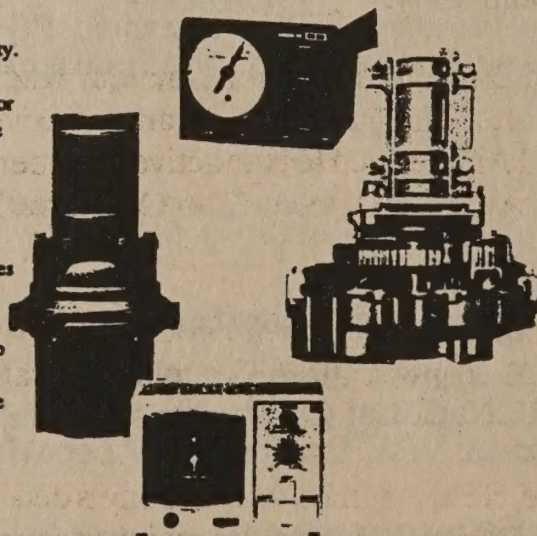
CREATE is serious about long term reliability. The CREATE RCS series rotators were designed with the serious DX'er in mind. Three models for medium, large and ultra large antenna arrays are available.

### ROTOR FEATURES OF RCS SERIES

\* Large strong reduction gear system provides long term reliability during years of rugged operation. \* Worm drive gearing provides powerful braking force and low backlash to keep your antenna in position during severe weather conditions. \* Cast and machined aluminum case provide the strength required for long lasting service. \* Mast clamp guides for ease of mast installation.

### CONTROLLER FEATURES OF RCS SERIES

\* Speed control using silicon control rectifiers allows slow speed without reduction in rotation torque. Rotating spec is constant 60 to 200 seconds per 360 degrees. \* Reverse delay control (RDC). Delays reverse command to rotor until antenna is at rest. Prevents damage to rotor antenna and tower system. \* Circular dial indicator, for quick accurate reading of antenna direction. Great circle overlay available for USA (west-cent-east). \* Preset (on 3 models) a must for quick setting of antenna direction. Just turn the knob to the new heading, the rest is automatic. Won't waste your time holding down the brake lever and wait.



### EMOTO ROTATORS

More than 60% of all Japan amateurs use EMOTO rotators. Many unique innovations and international patents have made EMOTO number one.

EMOTO has a fool proof method to calculate which of their rotators will satisfy your needs. This GD<sup>2</sup> formula considers your antenna (s) weight, boom and longest element length. The EMOTO sheet is in metric so one must convert weight 2.2lbs= 1kg and length in meters 3.3ft=1 meter. Calculate your GD<sup>2</sup> then compare EMOTO GD<sup>2</sup> spec above.

$$GD^2 = W \times \frac{L^2 + B^2}{12}$$

Where: W: weight of antenna (kg)  
L: length of longest element (m)  
B: length of boom(m)

### GD<sup>2</sup> EXAMPLES: Kgm<sup>2</sup>

TH7DX (437), TH3JR (63), 205BA (675), DISC7-3 (1300), A3S (61), A4S (173), KLM KT34XA (378), 3 ELE TRIBAND (150), 6 ELE TRIBAND (400), 20M 5 ELE (750), 15M 6 ELE (650), 40M 2 ELE SHORT BOOM (240), 40M 2 ELE FULL BOOM (800), 80M 2 ELE (1500), STACK ARRAYS 10M 5 ELE (60), 15M 5 ELE (200), 20M 5 ELE (750), 60+200+750=1010

EMOTO also has a robust AZ-EL rotator that has computer I/O ports. For those working satellites or EME moon bounce the EV700D5X should do the job, as rotating torque is more than double the YAESU G5400B AZ-EL.

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# PRESIDENTS CORNER

## FIELD DAY FOCUS

Ham bands are buzzing about Field Day plans. Meetings include presentations, sign up lists and requests for station managers. Some plans are exotic, with state of the art equipment and hi-tech station construction and management. Computer logging will be common to many stations, with duplications quickly identified BEFORE they make the logs.

New amateurs are awed, but curious people. Hope your club involved 1992/3 additions to the ham ranks. There have been a number of local novice/tech classes this year, and amateur calls are beginning to arrive. Field day is a great time to dispel the fear of operating by encouraging new amateurs to get involved in all aspects of putting "emergency" stations on the air.

There are so many approaches to field day operations that people who belong to more than one club get their choice of "styles". Some clubs are determined to win and put skill and operating speed first. Others are social clubs, and put food and cooking skill ahead of point accumulation. In both extremes, the ability to put efficient equipment and capable antennas into place in a short time is a benefit to the hobby. If we can do that for fun, we could do it for real if a national need arose.

I am anxious to read the club columns, with the wild stories and successes of field day. I hope the insects were few, the contacts were many, the storms were elsewhere and the food and companionship was fun.

Tony, WA3YLO

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## ARRL ATLANTIC DIVISION "AMATEUR OF THE YEAR" AWARD

The 1993 ARRL Atlantic Division "Amateur of the Year" is Tony Young WA3YLO, of Bowie, MD. This award is presented to an outstanding all-round Amateur from the Atlantic Division with a strong record of service to the Amateur community.

Tony is currently the president of the Foundation for Amateur Radio, a consortium of radio clubs in the Baltimore-Washington, DC, area which administers an extensive program of college and technical school scholarships for licensed Amateurs. He is an active member and past president of the Anne Arundel Radio Club, and serves as ARRL Affiliated Club Coordinator for the Maryland/District of Columbia Section.

On the air, Tony contributes to public service communications through the Anne Arundel Radio Club and the National Traffic System. Tony's callsign is familiar to traffic-handlers on all modes from the local nets to Eastern Area.

Of his many activities, none more clearly demonstrates Tony's dedication to Amateur Radio than his leadership in the Anne Arundel Radio Club's license training courses. He has helped train more than 200 students, most of whom are now licensed, and has shared information on AARC's program with others through presentations at the ARRL East Coast Educational Workshop.

The award was presented at the ARRL Atlantic Division Convention, held in conjunction with the Rochester, NY, Hamfest on May 15, 1993.



## American Radio Relay League Report

By John Swafford - W4HU

*This ARRL Report provides a brief summary of information published in the ARRL LETTER and other reports. The LETTER provides timely news of interest to active Radio Amateurs. Any League member may subscribe to the ARRL LETTER.*

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### **Joint resolution presented to Congress commends amateurs, urges protections.**

Joint Resolution S.J. 90 was introduced in the U.S. Senate on May 7, 1993, by Sen. Charles Robb of Virginia. It's a bill that recognizes radio amateurs, supports amateurs "as national policy," and urges that regulations "facilitate" Amateur Radio operation as a "public benefit."

The resolution results not only from the diligent efforts of the League's Washington team but -- more importantly -- from the thousands of amateurs who give their time and energy in public service, in technical experimentation, in education, and in international good will.

Sen. Robb entered the following statement into the Congressional Record:

"S.J. Res. 90. A joint resolution to recognize the achievements of radio amateurs and to establish support for such amateurs as national policy; to the Committee on Commerce, Science, and Transportation.

### **"AMATEUR RADIO SERVICE JOINT RESOLUTION"**

"Mr. ROBB. Mr. President, today I am pleased to be joined by Senators AKAKA, DECONCINI, PRESSLER, and SHELBY to introduce a joint resolution that will grant well-deserved recognition to a valuable national resource, the Amateur Radio Service. For the past 80 years, this group of dedicated volunteers has been first on the scene for virtually every communications emergency. When Mother Nature or a human misstep causes the telephone lines to go down or radio circuits to be overloaded, the 'Ham' operators are there with their equipment, providing communications until the regular infrastructure is back to normal.

"Radio amateurs also demonstrate their expertise in another way, as technical innovators. Eager to push back technical frontiers, amateurs probe the upper limits of the useful radio spectrum, discover much about radio propagation, and develop practical and affordable alternatives to complicated expensive new equipment from the laboratories.

"Our resolution expresses the Nation's gratitude for both the technical and disaster communications achievements of the Amateur Radio Service. But words without deeds, it is often said, are empty. Keeping that in mind, this resolution goes beyond commendation to give the amateurs a tool or persuasion to smooth their path; it urges adoption of rules and regulations that encourage the use of new technologies within the Amateur Radio Service.

"Finally, without limiting the decision-making capability of any agency -- local, State or Federal -- the resolution urges that any regulations which are necessary at any level of government be crafted in ways that facilitate and encourage amateur radio operation as a public benefit.

"We urge its prompt adoption by the Senate."

Co-sponsoring the joint resolution were Senators Akaka of Hawaii, DeConcini of Arizona, Pressler of South Dakota, and Shelby of Alabama.

*Continued on next page*



Last fall the Congress adjourned without acting on companion Amateur Radio bills in the House and Senate and those bills died. The House bill, H.R. 73, was co-sponsored by more than half -- 219 -- of the 435 House members, while just over a third, 35, of the Senate's members signed on to the Senate version, S.1372, before the 102nd Congress adjourned.

At the time, ARRL President George Wilson III, W4OYI, said "With half the House and more than a third of the Senate already co-sponsors, Amateur Radio has a big head start in working with the 103rd Congress next year."

The spade work done by ARRL Washington Area Coordinator Perry Williams, W1UED, and other League officials, now has resulted in S.J. Res. 90.

## **JOINT RESOLUTION**

To recognize the achievements of radio amateurs, and to establish support for such amateurs as national policy.

Whereas Congress has expressed its determination in section 1 of the Communications Act of 1934 (47 U.S.C. 151) to promote safety of life and property through the use of radio communication;

Whereas Congress, in section 7 of the Communications Act of 1934 (U.S.C. 157), established a policy to encourage the provision of new technologies and services:

Whereas Congress, in section 3 of the Communications Act of 1934, defined radio stations to include amateur stations operated by persons interested in radio technique without pecuniary interest;

Whereas the Federal Communications Commission has created an effective regulatory framework through which the amateur radio service has been able to achieve the goals of the service;

Whereas these regulations, set forth in part 97 of title 47 of the Code of Federal Regulations clarify and extend the purposes of the amateur radio service as a --

- (1) voluntary noncommercial communication service, particularly with respect to providing emergency communications;
- (2) contributing service to the advancement of the telecommunications infrastructure;
- (3) service which encourages improvement of an individual's technical and operating skills;
- (4) service providing a national reservoir of trained operators, technicians and electronics experts; and
- (5) service enhancing international good will.

Whereas Congress finds that members of the amateur radio service community have provided invaluable emergency communications services following such disasters as Hurricanes Hugo, Andrew, and Iniki, the Mt. St. Helens eruption, the Loma Prieta earthquake, tornadoes, floods, wild fires, and industrial accidents in great number and variety across the Nation; and

*Continued on next page*



Whereas Congress finds that the amateur radio service has made a contribution to our Nation's communications by the crafting, in 1961, of the first Earth satellite licensed by the Federal Communications Commission, by its proof-of-concept for search and rescue satellites, by its continued exploration of the low Earth orbit in particular pointing the way to commercial use thereof in the 1990s, by its pioneering of communications using reflections from meteor trails, a technique now used for certain government and commercial communications, and by its leading role in development of low-cost/practical data transmission by radio which increasingly is being put to extensive use in, for instance, the land mobile service:

Now, therefore, be it Resolved by the Senate and House of Representatives of the United States of America in Congress assembled,

## **SECTION 1. FINDINGS AND DECLARATIONS OF CONGRESS.**

Congress finds and declares that --

(1) radio amateurs are hereby commended for their contributions to technical progress in electronics, and for their emergency radio communications in times of disaster;

(2) the Federal Communications Commission is urged to continue and enhance the development of the amateur radio service as a public benefit by adopting rules and regulations which encourage the use of new technologies within the amateur radio service; and

(3) reasonable accommodation should be made for the effective operation of amateur radio from residences, private vehicles and public areas, and that regulation at all levels of government should facilitate and encourage amateur radio operation as a public benefit.

## **ARRL EXECUTIVE COMMITTEE MEETING HIGHLIGHTS**

Here are some highlights of the ARRL Executive Committee's May 8 meeting. The full minutes will appear in July QST.

Mr. Sumner presented an interim report of an ARRL Headquarters task force which is analyzing the results of a survey of radio amateurs in the U.S conducted for ARRL late last year. The task force has been working for about two months, and has formed six working groups and two ad hoc groups to study various aspects of why radio amateurs do or do not become, or remain, members of ARRL.

Several innovations and changes in membership benefits and services are under consideration. Once studies are complete, the task force recommendations that are within the purview of staff will be implemented and those with policy or budget implications will be presented to the Board for its consideration.

An FCC news release announcing action in PR Docket 92-154, bringing Novice examinations into the VEC program, was issued just prior to the meeting. After discussion, on motion of Mr. Harrison, it was voted that it shall be the policy of ARRL/VEC to waive examination fees for Elements 1A and 2 (novice written and code tests).

*Continued on next page*



With regard to PR Docket 93-85, control operator responsibility, after discussion, on motion of Mr. Mendelsohn, the Executive Committee directed that comments be filed supporting the easing of the rules that now hold each control operator in a message-forwarding system fully and equally responsible for message content, as well as the control operator of a repeater.

The comments will propose that in the case of a message forwarding system, the responsibility of the "first forwarder" should be defined as establishing, with reasonable certainty, the identity of the originating amateur station; if such cannot be determined, the first forwarder would assume responsibility for the message content. The comments also will propose a modified definition for "repeater" which is to be developed by an informal working group consisting of Messrs. Mendelsohn, Imlay, Rinaldo and Sumner.

PR Docket 93-61, expansion of automatic vehicle monitoring at 902-928 MHz, was discussed. On motion of Mr. Mendelsohn, the following resolution was adopted: "Whereas, the 902-928 MHz band represents a unique spectrum opportunity and whereas, Amateur Radio continues to be in the forefront of technology, it is resolved that Counsel seek a primary allocation in the 902-928 MHz band and attempt to work out sharing arrangements elsewhere in the band as may be practicable."

Mr. Rinaldo presented a written report he had prepared with Senior Engineer Jon Bloom, KE3Z, on defining digital codes for HF amateur use. On motion of Mendelsohn, staff was directed to initiate discussions with the FCC seeking relief from existing restrictions on digital codes.

#### **House joins Senate in resolution - Amateurs called to letter-writing campaign.**

On May 20 the U.S. House of Representatives joined the Senate in the introduction of a resolution supporting Amateur Radio. H.J. Res. 199 was presented by Rep. Mike Kreidler (D-Wash.) and Rep. Jim Cooper (D-TN) with 13 initial cosponsors. The House resolution is identical in language to the Senate resolution, S.J. Res. 90, detailed in our last issue.

The ARRL Board of Directors, at their January, 1993 meeting, prepared the way for the resolutions with a motion by New England Division Director Bill Burden, WB1BRE:

"61. "VOTED that our Washington team is authorized to seek formal recognition by the 103rd Congress of the role played by the Amateur Radio Service as a national resource in preparation for and relief from disasters, and for technical progress in electronics."

Original co-sponsors of the House resolution were Reps. Thomas of Wyoming; Murtha of Pennsylvania; Mineta, Doolittle, and Gallegly of California; Deutsch and Peterson of Florida; Costello and Evans of Illinois; LaFalce of New York; Barcia of Michigan; and Frost and Coleman of Texas. Now the task is to line up many more cosponsors for both S.J. Res. 90 and H.J. Res. 199, as quickly as possible. Mail from home is always important to Senators and Representatives, but never more so than when one is seeking passage of a Joint Resolution. The potential impact of this type of legislation has been diluted in the minds of some Members of Congress by a plethora of resolutions seeking declaration of something like "National Pickle Week." Any potential stigma can be erased by good letters from constituents in support of the resolution; they needn't be long. Reasons for support are contained in the bill itself, perhaps amplified with a personal emergency service episode or a technical contribution of the writer.

*Continued on next page*



Your Senators and Representatives are listed in the US Government section of the phone book; if you aren't sure which of several Representatives is yours, just call any of them armed with your zip code. The mailing address for Senators is the Hon. \_\_\_\_\_, U.S. Senate, Washington, DC 20510; and for Representatives, the Hon. \_\_\_\_\_, U.S. House of Representatives, Washington, DC 20515.

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## **ETHEL SMITH, K4LMB FAR HAM OF THE YEAR**



PICTURED ABOVE IS Ethel Smith, K4LMB, AS SHE ENJOYED THE 1993 Spring Banquet with 72 of her FAR/QCWA friends. SHE WAS HONORED AS THE 1992/93 FAR HAM OF THE YEAR.



## CLUB CALL SIGNS

The FCC has amended its Amateur Service rules to provide for volunteer organizations to administer a system designed to provide special call signs to club and military recreation stations. This rules change resulted from one of the changes to the Communications Act included in the Telecommunications Authorization Act of 1992 (see this column in Dec. 1992 Autocall). Organizations selected for the new system will be known as "Club and Military Recreation Station Call Sign Administrators".

An administrator must enter into a written agreement with the FCC, and public notices will be issued listing the administrators. To be an administrator, the organization must exist for the purpose of furthering the Amateur Service. Its membership must include at least one percent of the amateur operators licensed by the FCC, and it must be capable of serving as an administrator in all places where the Amateur Service is regulated by the FCC. An administrator must agree to accept and process all properly completed license application forms from the trustees of club stations and from the custodians of military recreation stations without regard to race, sex, religion, national origin or membership (or lack thereof) in any Amateur Service organization. The organization cannot charge a fee for services provided as an administrator.

Within 10 days of receiving an application, an administrator must provide the FCC's licensing facility at Gettysburg, Pa. with the actual license document, including the call sign. The document must be ready for endorsement and mailing.

Each administrator will be assigned initially a block of two-by-three call signs having a two-letter prefix from the NA-NZ series. An example of a block would be NA1AAA through NA1ZZZ. (There are 26 possible blocks). The administrator must issue public announcements detailing the policies and procedures of its call sign system.

The new rules providing for club call sign administrators go into effect on July 19, 1993.

## PERMITTED AND PROHIBITED COMMUNICATIONS

The Commission's Report and Order on this matter (Part 97.113) is expected shortly. Meanwhile, a recent FCC letter (to the Municipal Justice Center in Aurora, Colorado) provides a further insight into present rules. In the letter it is said that the ham bands may be used for emergency communications "...when such communications are essential in connection with the immediate (emphasis added) safety of life and the immediate protection of property and normal communications are not available". Routine traffic matters are the business of the police department. "...the Commission's Rules, paragraph 97.113(a), prohibits any communications which is intended to facilitate the business or commercial affairs of any party".

## IS TECHNICIAN THE HAM PATH OF CHOICE?

The W5YI Report for May 15th contains their second annual detailed report on what has happened, month by month, in terms of newcomers to ham radio since code-free licensing came to the Amateur Service. The accompanying text summarizes the Tables, viz:

In the year prior to the advent of the Code-less Technician, 85% of the 27,000 newcomers learned Morse code and entered ham radio as a Novice. In the year following, the number of first time licensees jumped from an average of 2250 to nearly 4100 a month, an 82% increase. The first Codeless Technician ticket was not issued until March 12, 1991. Of the nearly 49,000 newcomers, 2/3 chose the No-Code Technician path into ham radio. The number of beginners entering ham radio at the 5-wpm Novice level dropped by 34%.

*Continued on next page*



In the second year following, the number of Codeless Technicians continued to increase but by a much lower percentage. The average number of newcomers to ham radio dropped to 3700 a month, signalling the end of the initial surge. Interest in the Codeless Technician Class certainly seems to be holding up, however. The FCC was right on target in their view that, given a choice, most newcomers to ham radio would elect the codeless path. Entry at the Novice level, however, dropped another 34%.

The number of examinees showing up at VEC exam sessions just about doubled in the year following the arrival of no-code hamming, from 67,000 to 116,000 applicants. In the year ending March 1993 the number of examinees increased another 10%.

(Note: These figures pre-date the inclusion of Novice Class Operator License Examinations in the Volunteer-Examiner Coordinator Examination System, which has now been implemented via an FCC Report and Order adopted May 3 and released May 14, 1993. Appropriate changes to the Rules are published in the R&O, and become effective July 1, 1993.

### **"SIGNATURES"**

The FCC has adopted an Order governing signature requirements for license applications that sets the stage for implementation of electronic filing of license applications in the private radio services, which include the personal and amateur radio services.

(Up until May 1st all license applications had to include a personally signed handwritten signature.) In October 1992 Congress amended the Communications Act of 1934 to allow electronic filing of license applications to be signed "...in any manner or form, including electronic means, as the Commission may prescribe by regulation." (Interesting trivia: more than 100 Public Laws have been enacted amending the Communica-

tions Act of 1934, from the 73rd through the 101st Congress).

### **FCC ACCEPTS HF PACKET PETITION FOR COMMENT.**

In our April column we summarized an ARRL Petition for rule making to establish permanent rules governing automatic control of MF and HF data operation in the Amateur Radio Service. On April 16 the FCC acknowledged receiving the petition and assigned Rule Making file number RM-8218. The FCC set an initial 30 day comment period prior to issuing a Notice of Proposed Rule Making.

### **NOVICE/TECH 30 METER PETITION DENIED**

According to Westlink Report (5/13/93) the FCC has denied a petition to grant Novice and Morse-certified Technician Class licensees access to the amateur 30 meter band. The petition, by William G. Welsh, W6DDB, asked that such licensees be allowed CW operation from 10.1 to 10.15 MHz. Welsh argued that the 40, 15 and 10 meter bands currently occupied by Novices and Technicians are becoming less useful due to changing sunspot conditions and interference from shortwave broadcast stations. He also said that the longer antennas needed for operation on 80 meters limited the appeal of that band for Novices and Technicians.

The FCC said that in opening the 30 meter band to the Amateur Service in 1985 it had not included Novices and Technicians in order to promote an acceptable balance between licensing incentives and operating privacy. It followed the same guideline in the opening of the 17 meter band in 1989, the FCC said. Thus, this petition for rule making was repetitive.

*Continued on next page*



### **THIRD NO THEORY PROPOSAL FILED.**

The lead article in Westlink Report for May 13, by Vincent Biancomano, WB2EZG, is reproduced below; minus WB2EZG's editorial opinions, because the opinions are not part of the petition, and because they are rather long. We include the article because it raises anew the question of whether technical expertise is a principal criterion for retaining our frequencies. Personally, we think not -- technical expertise is one criterion, but there are others, some of which are beyond our control. Therefore, we should not jump on this deceptively attractive bandwagon.

"A proposal for a no-code, no-theory HF license was refiled with the FCC on or about April 14th by WA2EQF, apparently in response to the Commission's request for supporting information to his initial proposal of June 2, 1992. In contrast to that relatively mild 4 page document, the latest one is 28 pages, and it is a no-holds-barred document that regrettably provides in some cases overwhelming evidence for the petitioner's claims -- the major claim being that easing requirements into (sic) amateur radio has in fact compromised amateurs' ability to hold onto their presently allocated frequencies, an issue of great concern to many of us for several years.

"The petition calls upon FCC to redefine Part 97.1 so that amateurs can meet the new goals and requirements of the Amateur Radio Service, and thus retain their frequencies without further encroachment by commercial interests; or that examination standards be restored so that amateurs be formally required to satisfy the present technical requirements of Part 97.1 (which the petitioner argues that amateurs no longer meet), and thus justify their frequencies without fear of further encroachment.

Given the fact that this proposal was issued at the same time, or perhaps just after FCC's proposal for rulemaking concerning further sharing of the 900 MHz amateur band, it is possible WA2WQF withheld the filing, waiting for further

evidence regarding the reclaiming of amateur frequencies (Ed: This is misleading in that amateurs are secondary users in the 900 MHz band). The timing of this refiling would thus certainly serve to support the petitioner's claims.

"The latest proposal calls upon FCC to formally announce its plans for the future of amateur radio as a technical hobby, or a non-technical one. The petitioner has apparently concluded that unless amateurs demonstrate their ability to meet either a newly defined Part 97.1 or formally demonstrate technical ability to meet the terms of the present Part 97.1, we have no justification to reclaim those frequencies.

"If the FCC's response is favorable we could see a return to more technically-based exams in the future; if the agency denies the petition, despite the evidence presented to indicate the Commission has led the movement to ease requirements into ham radio, then it may be effectively ruling that amateur radio will make the complete transition to a personal radio (Citizens Radio type) service in the near future. In any case, the Commission's actions will speak louder than words and send a clear message, one way or the other.

Thus no decision will be a decision and moreover, put amateurs on notice that they would do well to immediately address the question of their frequencies, and how to retain them".

---

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*This column will be devoted to helping new Amateurs understand some of the common questions encountered by most of us in our early hamming endeavors. Write us about your problems and we will try to provide the answers. Your input will be most welcome.*

### Putting on EARS and Listening Up

If you will take a close look, the front panel of every receiver and transceiver has a phone jack to allow you to plug in a separate pair of headphones and disable the built-in speaker. Earphones do several things; 1) they reduce the noise level for those who don't want to hear, and 2) reduce the extraneous room noise for the one who does want to listen only to the output of the radio. For some of us, using headphones when we operate might be a courtesy to those in the vicinity who don't care for CW, ham chatter, QRM or static.

Earphones have gone through a lot of variations over the years. At first there were "magnetic" phones (today's telephone receivers are still magnetic designs). These were designed with several thousand ohms resistance to be inserted into the plate circuit of a vacuum tube audio amplifier which could mean touching an exposed wire and ground put you in touch with the tubes plate voltage. An exotic variation was "crystal" phones that used piezoelectric crystals to produce sound, the reverse of the crystal microphone which changes sound waves into electrical signals. These phones had an impedance of half a megohm or more and could be capacity coupled to the audio circuit eliminating the potential plate voltage exposure. They also had good high frequency response, much better than magnetic phones which didn't generate much sound above 3500 Hz.

Today's earphones are all of the "dynamic" variety, in fact they are all just miniature permanent magnet loudspeakers. They have a low impedance of twenty ohms or less and are direct or capacity coupled to a driving circuit or through a stepdown output transformer. They operate at a low voltage and present no electrical hazard. However, they can produce enough sound energy to damage your hearing if used that way over a period of time. They say that the hearing of a lot

of teenagers has been severely impaired by listening for years to very loud rock music using earphones or extra powerful loudspeakers, so don't abuse your ears.

In today's miniaturized commercial ham gear, the built-in loudspeaker is often a little more than an oversized earphone. If you buy or liberate a 6 or 7 inch diameter permanent magnet (PM) speaker with 4 or 8 ohm impedance, and mount it in a 7 inch cube plywood box (with an open back) and plug it in to the remote speaker jack on the back of your rig, your rig will sound entirely different and much better. It will develop a reasonable amount of sound power with considerably better quality than the builtin speaker. In the days when Hallicrafters and National were the receiver kings, units came with ten inch diameter speakers in cubic foot enclosures that were advertised as broadcast quality sound. I'm suggesting something in between, it will make an astonishing difference.

Headphones and loudspeakers convert electrical energy into sound (audio) power. They do this very much like a transmission line and an antenna which work best when the drive and load impedances are matched. The loudspeaker enclosure provides the matching function which can greatly increase the efficiency of converting electrical energy into sound power as well as improving the quality of sound reproduction. In the commercial Hi-Fi business they often compensate for poor loudspeaker performance (small size) with increased power, like 100 watts or more per channel. For comparison, a full symphony orchestra produces about one and a half acoustic watts of power at full blast, and that's a lot of sound power.

In portable gear, like handhelds, a large part of the battery capacity goes into driving an inefficient speaker. Using a set of earphones will give you at least 25 percent more battery life.



## THE ARRL DXCC COUNTRIES LIST

The June 1993 edition of the ARRL DXCC COUNTRIES LIST is out. For those who have not seen this publication in several years will be in for a surprise. The lists of many years ago were just lists of the countries and the basic rules, nothing else. Today's DXCC list is much more. It contains a wealth of DX information for all DXers, both newcomers and big guns. The core of the publication is still

the official DXCC countries listing, however the list is set up with mode and band check off boxes for record keeping. The list has been shading to make it easier to read across the lines. Also the ITU and CD Zones are listed along with the continent, third party traffic info, which countries have QSL Bureau service and which countries are field checkable.

The complete rules along with a brief history of DXCC is included. There is a section on country criteria, accreditation criteria and info on how the field checking program operates. There is a shaded area listing all the recent changes to the list. There is a prefix cross reference list, a list of the DX Advisory Committee Members, addresses of all the ARRL Incoming DX QSL Bureaus, info on how the Incoming and Outgoing QSL Services operate.

The Allocation of International Call Signs info is included. This is very useful to determine what prefix belongs to what country. You would be surprised how many hams show their ignorance when some unusual prefix shows up on the band and they start screaming "What country is that" Using this list would eliminate this poor operating practice.

The DXCC Field Representatives are listed by ARRL Division and this is useful to new DXers who might want to have their DX cards checked locally or at some ARRL approved hamfest or ARRL Convention. The last item is the DXCC Award Application form.

This publication is a must if you are interested in DXing and the DXCC Awards program. It costs \$2 and can be ordered from ARRL HQ or it can be picked up at the ARRL booth at most hamfests and conventions.

### UPCOMING DXPEDITIONS

Liechtenstein HBO/Fs July 17-24  
Penguin Islands ZSI DLs July 24-Aug 3  
St. Pierre, Miq. WO/FPO July 9-13  
St. Paul Island WV29/CV9 July 9-12  
Walvis Bay ZS9 DLs Aug. 4-13

### UPCOMING DX CONTESTS

RAC Canada Day Contest July 1  
Venezuela S58 DX Contest July 3-4  
IARU HF World Championship July 10-11  
Columbia Independence Contest July 17  
Venezuela CW DX Contest July 24-25

### TIDBITS

The correct prefix for Yemen is now 4W. The ITU requested that the government of Yemen to give up either 4W or 7O. They relinquished 7O.

For those who worked some of the operators on the Yaseu DX Cribbe Cruise, QSL's can be sent to DX Cribbe

Cruise, 17210 Edwards road, Cerritos, CA 90701. SASE not required.

Do not bother to send QSL's for 6D2X to the XE QSL Bureau, they have 15 pounds of unclaimed cards.

### OPERATIONS ACCREDITED FOR DXCC

S21ZK for operations beginning March 6, 1993

T53UN March 20, 1992

6O/G3KOX December 14, 1992

T5/KF6BL December 26, 1992

T55FO January 6, 1993

T5CB January 31, 1993

T5/K3OQF February 21, 1993

YI9CW July 1, 1992

5X1A March 4, 1993

5X1B March 12, 1993

5X1C April 29, 1993

5X1XT April 26, 1993

9G1AA March 24, 1993

Cards for OK, OM, 4N5 are now being accepted for DXCC credit.



# **FOUNDATION FOR AMATEUR RADIO VOLUNTEER EXAMINER COOPERATIVE**

Nancy Draheim - NK4U  
3513 Old Post Road, Fairfax, VA 22030  
(703) 691-0078

## **SCHEDULE OF EXAMINATIONS 1993**

**NOTICE:** If you presently have a Technician class license which was acquired prior to March 21, 1987, keep a copy of this license available when you decide to upgrade to General class. It will be your responsibility to prove you are grandfathered for element 3B (General Theory).

### **JULY 10, 1993**

CHESAPEAKE DX ASSN (CHESAPEAKE, VA)(ARRL VEC)  
CONTACT: BILL VEREBELY KC4YX 804/424-4764

ANNE ARUNDEL RADIO CLUB (DAVIDSONVILLE, MD)(LAUREL VEC) WALK-IN  
CONTACT: NANCY ALLEY NT3Z 410/761-7115 BOB ISRAEL WC3I 301/262-5083

RICHMOND, VA (W5YI VEC) PREREGISTRATION REQUESTED  
CONTACT: DOW PIERCE 804/232-8128

MT. VERNON ARC (ALEXANDRIA, VA)(LAUREL VEC) WALK-IN  
CONTACT: FRANK MACKEY N4GUS 703/455-1510

UNIVERSITY OF MARYLAND ARC (COLLEGE PARK, MD)(W5YI VEC) WALK-IN  
CONTACT: SCOTT ROSENFELD NF3I 301/206-9921

DEPARTMENT OF STATE/GWU ARC (WASHINGTON, DC)(ARRL VEC) WALK-IN  
CONTACT: DERRILL ROHLFS W3WOX 301/423-0179

### **JULY 11, 1993**

D.C.M. ARC (LANDOVER, MD)(ARRL VEC) WALK-IN  
CONTACT: FREDDIE BATTLE NG3G 202/546-9348 DAY) 301/773-2898 (EVENING)

### **JULY 17, 1993**

LAUREL ARC (LAUREL, MD)(LAUREL, VEC) PREREGISTRATION DESIRABLE  
CONTACT: JOHN CREEL WB3GXW 301/572-5124 AFTER 6 PM

### **JULY 21, 1993**

MARYLAND MOBILEERS ARC (LAUREL VEC) LIMIT WALK-IN  
CONTACT: JERRY GAVIN NU3D 410/761-1423 ED CALHOUN W3DEQ 410/647-0370

*Continued on next page*



*Volunteer Examiner Cooperative - Continued*

**JULY 23 1993**

PENTAGON ARC (ARLINGTON, VA)(ARRL VEC) PREREGISTRATION DESIRED  
CONTACT: MARK WAGNER KB2PG 703 697-5752 (DAY) 703/239-1255 (7-10 PM)

**JULY 26, 1993**

ANTIETAM RADIO ASSN ARC (HAGERSTOWN, MD)(ARRL VEC)  
PREREGISTRATION REQUESTED CONTACT: PAGE PYNE WA3EOP 301/714-0688  
(DAY) BOB LAY 301/714-0688 (EVENING)

**JULY 30, 1993**

STAFFORD ARA (STAFFORD, VA)(ARRL VEC) WALK-IN  
CONTACT: DAVID BOYD K9MX 703/659-6241 JIM MCCLOUD N4LZJ 703/786-8012

**AUGUST 1, 1993**

D.C.M. ARC (LANDOVER, MD)(W5YI VEC) WALK-IN  
CONTACT: FREDDIE BATTLE NG3G 202/546-9348 (DAY) 301/773-2898 (EVENING)

**AUGUST 7, 1993**

MIDDLETOWN VE TEAM (MIDDLETOWN, VA)(ARRL VEC) WALK-IN  
CONTACT: WALT QUITTER NC4B 703/869-5241

UNIVERSITY OF MARYLAND ARC (COLLEGE PARK, MD)(W5YI VEC) WALK-IN  
CONTACT: SCOTT ROSENFELD NF3I 301/206-9921

**AUGUST 14, 1993**

MASSANUTTEN ARA (HARRISBURG, VA) (ARRL VEC) WALK-IN  
CONTACT: MARSHALL COOPER N4ZKH 703/856-8012 BETWEEN 6-9 PM

MOUNTAIN ARC (CUMBERLAND, MD) MOUNT ARC-VEC) WALK-IN  
CONTACT: LEO PATTERSON KQ8E 304/289-3576 OR GAY REMBOLD W3DFW  
301/724-0674

ANNE ARUNDEL RADIO CLUB (DAVIDSONVILLE, MD) (LAUREL VEC) WALK-IN  
CONTACT: NANCY ALLEY NT3Z 410/761-7115 OR BOB ISRAEL WC3I 301/262-5083

RICHMOND, VA (ARRL VEC) PREREGISTRATION REQUESTED  
CONTACT: RICK COOK AB4U 804/798-5048

*Continued on next page*



*Volunteer Examiner Cooperative - Continued*

**AUGUST 19, 1993**

BALTIMORE ARC (TOWSON, MD) (ARRL VEC)  
CONTACT: 410/HAM-TALK (LEAVE MESSAGE)

**AUGUST 21, 1993**

LAUREL ARC (LAUREL, MD) (LAUREL VEC) PREREGISTRATION DESIRABLE  
CONTACT: JOHN CREEL WB3GXW 301/572-5124 AFTER 6 PM

HAMPTON ROADS RADIO ASSN (HAMPTON ROADS, VA) (W5YI VEC)  
CONTACT: BILL RUNYON N4BDH 804/487-8611

**AUGUST 28, 1993**

FREDERICKSBURG VE TEAM (FREDERICKSBURG, VA) (ARRL VEC) WALK-IN  
CONTACT: KELLY SHAW AC4MB 703/891-5581 OR CAROLYN CAVANAGH AC4SK  
703/373-7076

HERNDON REPEATER GROUP (HERNDON, VA) (ARL VEC)  
CONTACT: MIKE WEBER WB8RDN 703/450-2304 (7-9 PM)

**AUGUST 31, 1993**

MARYLAND MOBILEERS ARC (LAUREL VEC) LIMITED WALK-IN  
CONTACT: JERRY GAVIN NU3D 410/761-1423 OR ED CALHOUN W3DEQ 410/647-0370

If you presently have a Technician class license which was aquired prior to March 21, 1987, keep a copy of this license available when you decide to upgrade to General class. It will be your responsibility to prove you are grandfathered for Element 3B (General Theory).

NOTE: All examinations require that you submit:  
Copy of your current Amateur Radio License (Bring Original)  
Completed FCC Form 610  
Check for appropriate examination fee  
Fees of individual VEC may vary

FOR ARRL VEC EXAMS, THE COST IS \$5.60  
FOR LAUREL VEC EXAMS, ALL TESTS ARE FREE  
FOR MOUNRAIN VEC EXAMS, ALL TESTS ARE FREE  
FOR W5YI VEC EXAMS, THE COST IS \$5.60

This schedule of examinations appears each month in Auto-Call Magazine  
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# Training Classes

## General Information

Alexandria Radio Club.....	John Forest - WZ4A.....	(703) 971-3905
Anne Arundel Radio Club.....	Tony Young - WA3YLO.....	(301) 262-1917
Arlington Amateur Radio Club.....	Fred Bardsley - WD4DHW.....	(703) 533-0372
Antietam Radio Association.....	Robert Long - KD3JK.....	(301) 824-5132
Baltimore Radio Amateur TV Society.....	Joe Chidester - W3SHZ.....	(410) 602-0353
Fauquier Amateur Radio Club.....	Neil Spokes - AB4YK.....	(703) 364-3861
Frederick Amateur Radio Club.....	Steve Bauman - W3FOA.....	(301) 662-4552
Herndon Repeater Group.....	Michael Weber - WB8RDN.....	(703) 450-2304
Laurel Amateur Radio Club.....	Pud Reaver - W3DQI.....	(301) 498-6293
MADRAS.....	Larry Ziecheck - N3GKS.....	(301) 984-6112
Maryland Mobileers ARC.....	John Baugus - N3JME.....	(301) 551-3161
Montgomery Amateur Radio Club.....	Jane Rosenthal - AA3CQ.....	(301) 762-6262
Mount Vernon Amateur Radio Club.....	John Forrest - WZ4A.....	(703) 971-3905
NASA/Goddard Amateur Radio Club.....	Vikki Gigante - KA3PVS.....	(301) 249-2609
Ole Virginia Hams ARC.....	John Fritsch - N4YOB.....	(703) 791-5995
Pentagon Amateur Radio Club.....	David Boyd - K9MX.....	(703) 659-6241
Rock Creek Amateur Radio Assn.....	Walt Ramsey - AK3B.....	(301) 949-3954
St. Mary's County ARA.....	.....	(301) 862-2214
Shenandoah Valley ARC.....	Guy Black - W4PSJ.....	(703) 722-4952
Southern Maryland ARC.....	Vic Curtis - WA3YUV.....	(301) 888-1388
Southern Patuxent ARC.....	Dwayne Kincaid - WD8OYG.....	(301) 586-2177
Springfield Estates ARC.....	Will Schmitt - KD4CNX.....	(703) 768-5709
Stafford Adult Education.....	Jerry Mullinix - AC4HK.....	(703) 659-3905
Sterling Park Amateur Radio Club.....	Mark Johnson - WS3N.....	(703) 430-3804
Tri-County Amateur Radio Club.....	Al Sines - WA3QGA Box 710, College Park, MD 20740	
Vienna Wireless Society.....	Paul Wilkins - AB4CY.....	(703) 560-2779
Woodbridge Wireless, Inc.....	Loyd Davis - K8EI.....	(703) 360-0248

## FOUNDATION MEETING

The Foundation for Amateur Radio, Inc. meets at 8: p.m. on the second Wednesday of each month.

**Visitors are always welcome**

The next meeting will be July 14 at the  
Lee Center, Alexandria, Virginia

Take Capital Beltway to Exit 1 (US 1 North)

North to the second traffic light, Left on Gibbon Street to Fayette

Left on Fayette to dead end at Lee Center parking lot

Talk-in on 146.55



## 'Tis The Season

Spring has arrived in the National Capital Area with a number of impressive thunderstorms. Many of these storms contained extremely strong winds, damaging hail and provided spectacular lightening displays.

SKYWARN was activated by the National Weather Service (NWS) on May 5, 12, 13, and 18 for thunderstorm activity. Of these four storms, the most notable was the storm of May 12. At various times this storm produced hail over one inch in diameter, caused widespread power failures and, unfortunately, three deaths. Most of these storms moved from West to East which made the western perimeter subnet's reports critically important to the forecasters. Everyone who participated in the nets is thanked for their assistance. The following people served as net control, either at Sterling or at a remote site at some time during these storms: KC4YGB, N0KYZ, N0AA, WD4RPV, N3HIZ, KD4DGQ, KD4DGO, KC4UBM, K2HJ, N1KCE, KD4FBU, KD4ENQ, WA2RPX, NF3X, N3NYZ, KB3ADV, W3MMC, KA3ZCI, KB2CEV, and KC40CG. We are truly thrilled to have so many people involved in net control and strongly encourage anyone who would like to be trained to be a net control station to contact Dan KC40CG. Thanks again to the entire SKYWARN system for many jobs well done.

The SKYWARN amateur radio station was briefly shown on nationwide TV on the CBS Network, on Wednesday, May 12 as part of a segment of a show, "How'd They Do That" concerning the NWS forecast of the Blizzard of '93. Thanks again to all who participated in that marathon net.

Hurricane season begins on June 1, 1993. Please take the time to review your hurricane preparedness plans. The NWS has an excellent booklet entitled "Hurricanes! A Familiarization Guide" if you need further information. Many amateurs attended one of the conferences in southern Maryland on May 18. Dr. Bob Sheets from the National Hurricane Center in Coral Gables, Florida, as well as many other expert speakers gave outstanding presentations on hurricane preparedness.

A number of stations have experienced difficulty in successfully accessing the 147.300 + (WA4TSC) repeater during some recent storms. It is important to net operations that all participants be able to effectively "make it into the repeater." We have made arrangements with Bill N4DCC and the Northern Virginia Traffic Net (NVTN), which meets nightly at 7:30PM on 147.300 +, to assist any amateur in finding a good location and power level necessary to insure good communication through the repeater. Please feel free to check into the net and indicate that you need a signal report on the equipment and location you plan to be using during a SKYWARN net. We thank Bill and the NVTN for their assistance and cooperation in making both nets run effectively.

SKYWARN has formed an advisory committee composed of RACES, ARES and REACT representatives from West Virginia, Virginia and Maryland. This committee is chaired by Barbara McNaught, NWS SKYWARN Program Manager. The goals of the committee are to improve coordination across state boundaries and to advise the NWS of potential improvements to the amateur radio portion of the SKYWARN program.

73, Dan - KA3OCG



## Moose Amateur Radio Club

- Meetings: Last Saturday of every month 10:00a.m. Loyal Order of Moose Lodge 562, Towson, Maryland
- Information: Tom Molyneaux, KE3GK, 760-6925 - Nick Nickles, WZ3J, 668-2363
- Repeater: 224.12 MHz (-)
- Address: Loyal Order of Moose, Towson Lodge 562, Amateur Radio Club, 8801 Mylander Lane, Towson, Maryland 21286
- Hamfest: Sunday, 22 August 1993 at above address or call Nick, WZ3J (Listed Above) for information.

The Moose Amateur Radio Club, having a team of 6 ARRL certified Volunteer Examiners, put on their first VE testing session on May 15th 1993. We had 18 people take 36 exams with 11 people upgrading.

When I was taking exams either at MRC (Laurel Amateur Radio Club) or North County Library in Anne Arundel County (Maryland Mobileers), I thought that the VEs had it easy. Yea, it's a piece of cake doing this VE stuff, I wonder why they need so many other VEs hanging around?

Then there was always someone saying, "Aw, come-on guys, I only missed by one, can't you let me slide"? Yep, I have heard that many times and I heard the VEs response of "sorry, wanna take the test again"? I thought that these guys were heartless HAMs who took pleasure in seeing the little guy fail. Boy was I wrong! Now that I am a VE, I can understand what the other fellas go through. If I ever gave one of you guys a rotten look, please forgive me.

Let me admit here and now ... This VE stuff is not easy! It takes lots of preparation, lots of spare time and lots of dedication. It gets confusing around the testing session, especially the first one! There is a lot going on. I was confused and had to STOP numerous times and regroup! I actually felt a little sick when I had to mark some of those tests, seeing that they missed a passing grade by one or two answers. It was worse telling them.

How do you other VEs maintain composure? Now I realize, first, that VE accreditation is on the line at every testing session, the FCC does monitor the VE process. I.E; the FCC investigation into a VE session in New York. VEs have to play by the book, if not, the book can be thrown at them! Secondly, VEs don't get paid, there is no profit to gain, and there is no power or glory to be had. VEs are DEDICATED volunteers who spend hours and hours of their spare time helping other Amateurs and would-be Amateurs along the path of advancement. We owe these individuals a big THANKS! I know that I owe them one ... THANKS!

I might add that VEs are not the only people involved in testing. There are also dedicated Amateurs who help the VEs out at these testing sessions. These people deserve a big THANKS too!

The next time you go to a testing session, please remember, these guys and gals are donating their time to YOU, and that nothing gives them more pleasure than seeing you PASS!

Tom, KE3GK

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## Northern Virginia FM Association, Inc.

- Meetings: 3 times per year (fall, spring, winter)
- Weekly Nets: NVFMA Net: Every Wed., 8:00 PM local, 146.79 ARES/Public Service Net, Every Sun., 9:00 p.m. local, 146.91 On Air Equipment Clinic, First Wed. 7:30 p.m. local, 146.79
- Repeaters: 2-Meter: 146.79- (W4LBL-FFX City) & 146.91- (W4XG-Tysons Corner) 6-Meter: 53.37 MHz KM4OI Repeater 440 Mhz: 444.75 + (K4JYF-Tysons Corner) 220 Mhz: 224.10 (WB4YHD-FFX City & X-linked to 146.79) 224.34- (KB4CVL-Tysons Corner) 1292.1 MHz out / 1272.1 MHz in (K6LEW-Tysons Corner)
- Membership Info: Norm Rosenthal-KB4VLP (703) 425-7108 or Dan-KC4OCG (703) 281-2358 or Norm-KB4VLP 703-912-5891.

As voted for by the membership of the NVFMA, the 146.910 repeater has been connected to the building's emergency power generator which will hopefully keep the repeater on the air during power failures which have affected the building numerous times during the past two years.

The NVFMA held their Annual Meeting on June 17, 1993 at the Fairhill Elementary School. We had good attendance and status reports on all the repeaters were given to the group.

The autopatch code will change on or about July 1, 1993. Postcards were mailed to all current members for renewal. If you did not receive a postcard and would like to renew your membership and support the repeaters, please contact Dan KC4OCG.

NVFMA baseball caps are available at EEB. The word is that they look "nice!"

Dan KC4OCG

## The Springfield Estates Elementary School Amateur Radio Club (SEESARC)

- Meetings: First Friday of every month at 7:30 p.m., Springfield Estates Elementary School, Room 2, 6200 Charles Goff Dr., Springfield, VA
- President: Ben Mudrak, KD4CNV (703)-971-7710 Vice President: Will Schmitt, KD4CNX (703)-768-5079 Secretary: Luke Ward, KO4IQ (703)-922-6545 Treasurer: Richelle Brown, KD4MFB (703)-690-0129
- Comp. Conf.: Conference 4 on Dos Spitzen Sparken BBS (703)-791-6198
- Mailing: SEESARC, 6200 Charles Goff Dr., Springfield, VA 22150

We held our next to the last meeting of the school year on May 7th. It has been a busy year and we are preparing to wrap it up with our election of officers at this coming meeting. We have completed our third club Novice class. Many thanks to Bill Schmitt, KD4CNS and Keith Ward, KO4IO for their hard work and persistence in teaching these classes!

The club is always on the lookout for interesting guest speakers who wish to share something on the subject of Ham radio. If you are the possessor of keen insights into the world of amateur radio, or if you are someone who has done a lot of neat stuff, we would like to hear from you. Just contact any of the officers listed above.

As always we are on the lookout for equipment donations. In the past we have been fortunate to have received valuable equipment donated by generous Hams. The donated equipment has enabled us to set up a nice station at the school. We used this station in our participation in this year's School Club Roundup.

Once again this year, SEESARC will operate the Novice station for

MVARC at Field Day. Look for our signs and stop by for a visit.

Ben Mudrak, KD4CNV



## Fauquier Amateur Radio Association

- Meetings: Second Tuesday of each month, 7:30 p.m. Local. Shadow Lawn Recreation Center, Warrenton, Virginia.
- Net: Every Wednesday night at 9:00 p.m. Local, 147.165 rprr.
- Packet: N4YXW-1 full service BBS in Warrenton, VA 145.090 MHz
- Chat Node: NET ROM compatible node :FARA 145.070 MHz
- Repeater: NZ4N/R 147.165 Mhz out; 147.765 Mhz in.
- Information: Neil-AB4YK. (703) 364-3861

### GENE GARRISON DESCRIBES VOICE OF AMERICA AT MAY 11 MEETING

About 20 of Fauquier's hams were lucky enough to be at the May meeting to hear FARA charter member, Gene Garrison, K4KSU present a description of the Voice of America. He began the presentation with a live demonstration of the VOA sign-on at 8 pm sharp. A 500,000 Watt Tx signs on with more than a little measure of authority and Gene certainly demonstrated that. Gene then ran a most interesting 20 minute TV tape demonstration of the technical side of the organization. VOA is a very impressive operation with relay stations around the world. In some cases, the equipment is not state of the art, in others it is really up to date.

Gene indicated that in some cases trends are in the direction of smaller transmitters with as little as a one city audience. The collapse of the Soviet Union has had a big effect on how the VOA gets its message across and what that message is. The goal is to be able to get the message not to an avid SWL with good equipment but to the man in the street with an \$8 radio. All in all a thoroughly professional presentation from Gene who said how much he is enjoying working for this fine organization.

*Continued on Next Page*

## Washington Metropolitan Area

## IBM Amateur Radio Club

- Meetings: First Tuesday of the month that is a work day, 5:45 p.m. - 7:00 p.m.
- Next Meeting: July 6th at 5:45 p.m. Building 182, Room 3C51 (The Radio Shack) (301) 240-6877
- Chat Net: Second Wednesday of each month, 5:00 p.m. 146.520
- Packet: 145.610 MHz, running TCP/IP net-code (WA3YHE-1)
- Information: Erinn Tordella-N3HSA (301) 240-6200 The Radio Room (301) 240-6877

The WMA/IBM Amateur Radio Association (ARA) is twice blessed this month. In the first instance, we received via Jim Kasunic-KA3LPC and UPS, our ICOM 2-Meter rig, restored to full functionality thanks to replacement hardware for the volume control potentiometer. Thanks also to Roel de Jonge-N3FJJ for his coordination efforts over the last several months. The rig is now available for use in both the voice and packet modes. If you have any operational questions, please check with one of the officers listed on the back of the WMA/IBM ARA Newsletter.

In addition to the good news about the Club's VHF rig, we are delighted to report that the new Cushcraft R7 Antenna has arrived safely and awaits installation on a time-available (and roof accessibility) basis. The R7 vertical will enhance our functional capability by including the WARC bands. The goal is to install and test the new antenna by 4th quarter 93, hopefully sooner. (Even though it is an accepted axiom among Radio Amateurs that antennas erected under blizzard conditions perform more efficiently throughout the year, we don't want to push our luck by frightening the IBM Management Advisor into believing that we have taken leave of our senses by climbing the roof under adverse conditions!)

*Continued on Next Page*



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## Montgomery Amateur Radio Club

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- Meetings: 1st and 3rd Wednesdays of each month at 7:30 p.m. Executive Office Bldg. Montgomery Co. Government Center, 101 Monroe St., Rockville, MD. Park underground on G-2.
- Repeater: 146.355 in (Rockville & Germantown)/146.955 out (Rockville)
- Mailing: M.A.R.C., P.O. Box 611, Gaithersburg, Maryland 20884-0611
- Information: Jeff Horlick-KZ3F (301)258-0112; Steve Todd-K2IYQ (301)253-4172
- Training: Jane Rosenthal-AA3CQ (301) 762-6262; Dick Hayman-K3DML 340-8251

The "talk of the town" is of the Montgomery Amateur Radio Club's (M.A.R.C.'s) recently installed "new and improved" DB Products 4-Bay, 15-foot vertical commercial antenna for the 146.955 MHz repeater's remote receive site--located atop the Science Building at Montgomery College's Germantown Campus. Delayed three consecutive weekends by Mother Nature's stormy antics, the installation was rescheduled successfully by Steve-K2IYQ and accomplished in record time by Stan-W3INK, Mark-N4EOC, and Tom-AA3AC on May 22!. According to the usual Antenna myth and folklore, the mere planning for an "Antenna Party" in the dead of Winter (if not its actual implementation) should serve to "gain" us well now that balmy Summer breezes (and tropospheric ducting!) prevail...seriously, it is hoped that the new antenna (with approximately 1dB of omidirectional antenna pattern gain) will boost receiver sensitivity to the North (I-270) and will fill in some "holes" formerly experienced by mobile and especially H/T (portable) users of the M.A.R.C. repeater in upper Montgomery County. Congratulations to W3INK and the M.A.R.C. Repeater Committee for "Mission Accomplished"!

*Continued on Next Page*

*Fauquier - Continued from previous page*

Fauquier hams participated in various emergency drills during April/May, the last one being the Heart and Lung Association Bike Ride fund raiser - a 150 mile ride from Fairfax to Richmond. It was a well organized effort and a pleasure for us to help out with.

FARA's June meeting will be given over to getting ready for Field Day. The club then takes a summer recess until the September meeting on Tuesday 14th at Shadow Lawn Recreation Center in Warrenton. See you there!

Neil, AB4YK

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**The deadline for submissions to AUTO-CALL is the 5th of the month prior to the month of publication!!!**

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*IBM Continued from previous page*

Have you ever wondered aloud--does ANYBODY ever REALLY win those door prizes they offer at hamfests?! Well believe it not, we actually have first-hand knowledge of someone who DID win: our very own Membership Secretary's XYL, Agatha de Jonge--N3LJL. At the Hagerstown Hamfest on May 16, she walked away with the top prize of a 2-Meter Handheld Transceiver! As Frank Pinkl-WA3YHE noted in the June edition of the WMA/IBM Newsletter: "I guess it's just like Lotto--you have to play (attend) to win." Speaking of the Newsletter, we'd like to express our appreciation to WA3YHE for once again publishing a newsworthy edition for the month of June. Frank has a knack for summarizing local "happenings" of interest to the Amateur Radio community; his articles are both informative and interesting....

This time next month, we hope to be able to report on the scheduled Saturday morning June 5th Breakfast meeting at Shoney's on Route 355 in Gaithersburg. In the meantime, in between time....

'73, Erinn-N3HSA



Congratulations are also in order to Rob-N3HQX, M.A.R.C. member and a Deputy Radio Officer for Montgomery County RACES. Rob was selected by the County Executive and County Council to be named as a "Volunteer of the Year" for 1992! To appreciate the magnitude of this honor, of approximately 760,000 residents in Montgomery County (1990 Census figures), only 70 or so are designated for this award annually.

Just to prove that new Club members can fully participate and succeed at M.A.R.C.-sponsored events, the husband and wife team of June-N3SYL and Mark-N3SYK Eakin were the 1st place winners in the M.A.R.C. Foxhunt of May 23rd! Spurred on by Mark-NW3S, Fox Impersonator (a.k.a. Hidden Transmitter), 5 additional teams checked into the M.A.R.C. Repeater, as follows: (1) Dennis-N7NXV; (2) Harry-KC3MX; (3) Aaron-N3NMT, Craig-N3NKD, and Paul-Awaiting Call Sign; (4) Bill-N3DCI, Kevin-WV3D, and Pat-"Non-Ham"; (5) David-N3NTX and Steven-N3NTY (father and son team). Also, supporting the Fox was Erinn-N3HSA, who solicited check-ins, announced the protocol, and monitored 146.955 for questions. In the true M.A.R.C.onian spirit, N3SYL and N3SYK have stepped forward and declared their willingness to become "Fox(es) for a Day" at the next Club-sanctioned transmitter hunt!

Following our business meeting of May 19, the Club was treated to an especially entertaining and informative technical presentation by Dio-KE3DS on the 27-year history and evolution of Intelsat satellite communications technology. Accompanied by vu-graph foils, 4-color handouts, and a 'realtime page-turner', (Ken-KD3VK!), KE3DS displayed his considerable teaching skills, as well as an in-depth knowledge of the global satellite communications business...thanks, Dio for a job well done!

By the time this issue of AUTO-CALL "hits the street", the Club will be participating in Field Day--thanks to our gracious hosts at COMSAT (Clarksburg, MD) who have generously offered to

share their spacious grounds, facilities, and accommodations (e.g., generator) with M.A.R.C. this year. Details to follow....

As we "tie the ribbons on" this month's article to meet yet another publication deadline, the M.A.R.C.-sponsored training classes have just completed, complemented by a Laurel-sponsored VEC session on 5/27. Next month, we hope to provide you with a roster of the instructors and facilitators--those individuals who "made it happen" for M.A.R.C. and for Amateur Radio.

Finally, we would like to express our collective appreciation to F.A.R.'s Ham of the Year, Ethel Smith-K4LMB for her cheerfulness, patience, and dedication to delivering a high-quality product each month, every month! Thank you, Ethel; welcome aboard, Doug.

'73 and be sure to stay 'clear and listening' to 146.955 MHz.

Erinn--N3HSA

# REMEMBER THE



# DEADLINE!



# The Antietam Radio Association-W3CWC is proud to present the 1993 Edition Maryland-DC QSO Party August 14-15

1600 Z August 14 - 0300 Z August 15 and  
1600 - 2359 Z August 15, 1993



Phone & CW: Stations may be worked once per band using each mode. CW QSOs in CW band only!  
Non-Maryland stations must work MD-DC stations. MD-DC stations may work anyone.

Portables and Mobiles that change counties during the test count as a separate station in each new county of operation. No repeater or packet QSOs.

Exchange: QTH & MAJOR CATEGORY OF ENTRY. QTH is county for Maryland Stations, U.S. State, Canadian Province, or if other DX, Country.  
Major Categories are - CLUB, QRP, MOBILE, Novice/Tech and STANDARD.  
STATIONS SHOULD SEND THE Major Category that reflects THEIR HIGHEST POINT VALUE.

Suggested Frequencies: SSB 3.92 7.23 14.26 21.37 28.38 50.15 146.55 MHz  
CW 3.643 3.701 7.06 7.126 14.04 21.115 28.04 28.115 MHz  
CW is suggested on the odd half hours. Examples 1730, 1930, 2130 UTC

Scoring: For Non-Maryland-DC Stations- Each MD County, Baltimore City and DC are multipliers.  
For Maryland-DC Stations- Multipliers are MD Counties, Baltimore City, DC, Each of the other 49 states, Canadian Provinces + 1 for working DX outside of Canada  
*Multipliers may be claimed once only ! They do not repeat on different bands.*

QSO POINTS: 10 points for club station QSOs (Clubs anywhere for MD-DC Stations)  
5 points for Mobile QSOs (Mobiles anywhere for MD-DC Stations)  
3 points for QSOs with QRP stations (SSB/CW) or Novice/Tech on CW  
2 points for CW ( or RTTY) QSOs with STANDARD STATIONS  
1 point for any other valid contact (Standard SSB & FM)

Special Note: Highest Point Value per QSO Applies (example- a cw/Mobile QSO is 5 points)

Final Score: add up all QSO Points and multiply by the sum of the multipliers.

AWARDS: Certificate and QSO PARTY LOGO WATCH to the high scoring MDC Log and Top NON-MD Log.  
Certificates awarded for all other categories including 10 best MD-DC, Best each US State, Canadian Province, DX Country, MD Club, DC Club, MD-DC Mobile, Best YL Score, Best QRP or SWL log each state, Best Novice/Tech each state. A PLAQUE WILL BE AWARDED THE HIGH SCORING MD-DC CLUB. Participation certificates to all with 50 or more QSO Points in entry.

Send logs with a SASE by Sept 10, 1993 to A.R.A. P.O. Box 52 Hagerstown, MD 21741



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# MARYLAND HAMFEST AND COMPUTER FEST

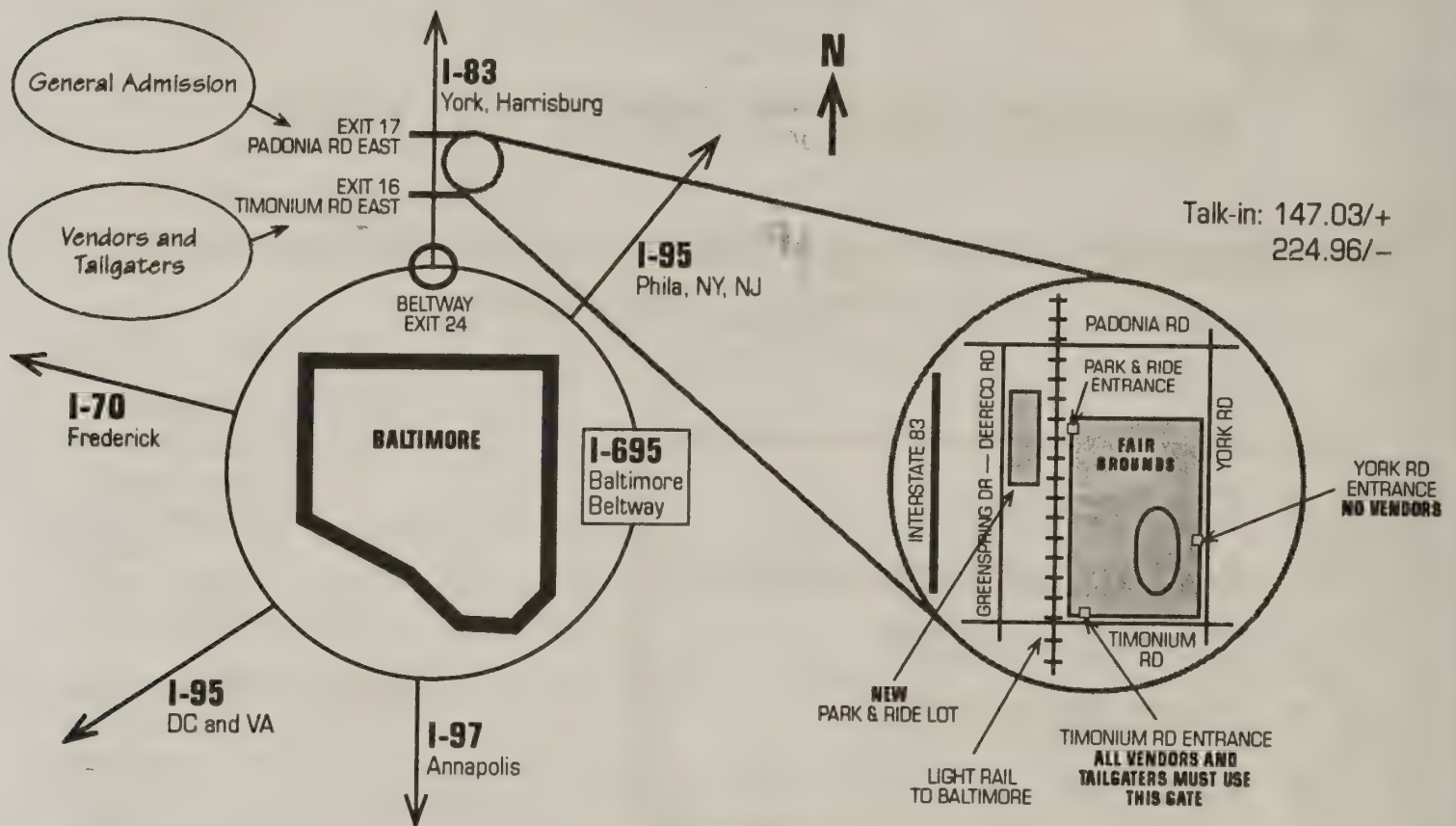


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## Tri-County Amateur Radio Club

- Meetings: Semi-annual business meetings, time and date announced on the air and in the club newsletter.
- Repeater: KA3LAO/R, 147.780 MHz in; 147.180 MHz out.
- On-the-air: Tuesdays at 1930 hours (Local time). Amateur Radio Newline Tuesdays at 1915 hours (Local time).
- Mailing: P.O. Box 10592, Silver Spring, MD 20914

The Tri-County technical committee (or actually "the group") has been quite busy lately. Not only are there six receiver sites now in operation throughout the area but new features are being added. Thanks to the efforts of Mike - KA3OFR, Boat - WD4OXQ, and Frog - N3JML the Chesapeake link system is making great progress. If you have not yet heard, the Chesapeake link system is an effort by Tri-County to link a number of repeaters in Maryland with a radio backbone which will permit connection with any repeater on the system. This Maryland link will also have a gateway into the Pennsylvania system, giving users the ability to access repeaters from Ocean City through Pennsylvania, Virginia, into North Carolina. The northern and southern legs of the Chesapeake system are completed and the gang are working on the connecting segments. They still have a goal of completing the link between Ocean City and the 718 machine by summer. While they were working on the Tri-County machine in Ocean City (KA3BAF on 147.015), they added an autopatch capability. As a Tri-County member you can request access to this feature which provides patch access to the city. Nice job guys!

Now that summer has arrived, your club is gearing up for some social events. If everything has gone well, another of the famous Tri-County dinners has gone into the history books for June. But don't think that is it. On Saturday July 19th Tri-County is planning a family picnic at the Buddy Attic Park in Greenbelt from 1600 - 2000. There will be lots of activities for the families including

volleyball, paddleboats, and fishing (make sure you have the proper license). Parking in the immediate area is limited so plan on parking on Ridge Road in front of the Police Department. For additional information, check into the weekly net on Tuesdays at 1930 or contact Mike - KA3OFR, Dave - WB3KXL, or Paul-N3GII. If you are planning to attend make sure you contact one of these individuals to determine what needs to be brought. This one promises to be a great time, see you there!

If you have not heard yet, the Tri-County net control station, John-WB3GXW, has been designated as an Official ARRL Bulletin Station.

### Heard On The Repeater:

This feature of our report attempts to provide useful suggestions for efficient and effective use of the repeater:

Some folks are still encountering problems activating the patch. In order for the controller to recognize your access code and number you are dialing, you need to firmly depress the appropriate button so a clear tone is generated. Hitting two keys, having a tone that is too short, keying the number too early, or keying too fast could introduce errors. If you dial a number and hear two beeps instead of a ring, then you have tried to call a number that is not permitted through the machine.

A reminder: the autopatch speed dial numbers are back in service. Consult the list in your membership package for the numbers. Don't forget the Tri-County on-the-air net which meets each Tuesday at 1930 local. If you are listening at 1915 you will hear the latest NewsLine information, ARRL bulletins, ARRL propagation forecasts, and the latest exam schedules throughout the area. NewsLine is an amateur radio news service from California which always has information of interest to the amateur community.

Greg - WA3FSC

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**Be A Know It All, Read AUTO-CALL!!**



# DMARC Digital Mid-Atlantic Radio Council

## "The Packet People"

- Meetings: Next quarterly meeting: Naval Academy, Annapolis on August 7
- Information: Tom Dove, K3ORC @ K3ORC, Secretary, 22H Queen Victoria Way Chester, MD 21619
- UserGroup: Maureen Mulrooney, N3JNE @ KA3RFE, 410-798-4204 in Davidsonville
- TechHelp: Dick Wareing, K3AKK @ WB3V 703-524-1727 in Arlington

The May quarterly meeting was held at the Anne Arundel Radio Club clubhouse. Gordon, WJ3K, was elected as a Director, replacing Doug, N2GTE, who resigned for personal reasons. Gordon reported on the activities of the Maryland Packet Traffic Network. The WB3V BBS was reported to need more HF links.

The group discussed improving the network throughout the DMARC area, from Elk Neck south to Richmond and from Salisbury west to the Blue Ridge. It was decided to spend \$400 on a "rehab" of the Elk Neck nodes. The power is due to be restored there this month. Trees had felled the 5000 volt line feeding the site. Steve, KE3DO, will take over management of the site with Dick, K3AKK, providing equipment maintenance. New radios for 441.0 and 145.01 will feed a Diamond X-700 antenna. The group will purchase a 75 amp switching power supply for current and future 900 MHz needs. While the ELK nodes were off the air, the KENTI to DOV link on 147.57 provided a route to link to stations in SNJ and EPA.

In early June, a new 223.54 link was established between the Washington, DCA, and the Frederick, FDK. nodesites. This supplements the crowded 446.075 link and provides user and message forwarding service to Martinsburg and north to the Harrisburg area.

DMARC will cooperate with the Virginia Digital Group, VDG, in establishing additional packet networks in Virginia. The VDG is meeting at the Manassas hamfest for a planning session. One of the goals is a high volume link from the WashDC/NVa area to Richmond.

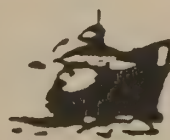
Bob, WB4APR, and Bob, N3IYI, demonstrated their Automatic Position Reporting system for packet. The WB4APR APRS program displays a full color and real time computer map which displays packet stations which have a Global Positioning System, GPS, receiver attached to the packet TNC. Even packet stations without a GPS receiver may send their coordinates for display by inserting their lat./long. in their Beacon Text. The format for the entry is BT!3845.37N/07629.13W The DMARC APRSig operates on the experimental packet frequency of 145.79. For those interested in GPS, the U.S. Coast Guard GPS Information Center operates a telephone BBS at 703-313-5910, up to 14.4 KB at 8N1 with a public forum.

The next DMARC meeting will be at the Naval Academy on Sunday, August 7th at 1:00 PM for a live demonstration of the APR system on Navy "YP" boats.

Work continues for one or more nodes to extend the SkyWarn packet system on 145.73. Nodes are under construction at Davidsonville, MD as well as at the DCA node site. Interlink to the Packet DXCluster system is to N4SR off the DCA6 network node.

73, Dick - K3AKK @ WB3V

### Chapter X



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## **Amateur Radio Research and Development Corp. (AMRAD)**

- Meetings: Second Thursday of each month, at the Fairfax County Library, McLean, VA (Talk-in AMRAD repeater)
- Repeater: WD4IWG (147.81 in/147.21 out); Jeff Brennan (WB4WLW), manager; WD4IWG is an open repeater for FM voice and digital communication, especially for experimental modes. Autopatch available to members.
- Data address: Internet address is [rmays@amrad.win.net](mailto:rmays@amrad.win.net)
- AMRAD CBBS: (703) 734-1387.
- Information: Andre Kesteloot N4ICK @ (703) 356-5519 or Terry Fox WB4JFI @ (703) 849-1189.

At the June meeting, Dennis Bodson (W4PWF) spoke on New Communications Technologies. Up-Coming Meetings: Rick Engelman of the FCC is scheduled to speak on Personal Communications Systems and New Communications Technologies on July 8th. Several AMRAD members have been involved in the construction of a new amateur radio satellite scheduled for launch on 31 August 1993. It will be a microsat, the OSCAR designator and number to be assigned. Orbiting at an altitude of 800 km., the satellite will carry a VHF receiver and one UHF transmitter with an output of about 5 watts. Check with AMSAT for further details and keplerian elements.

Construction of the new amateur radio satellite has postponed the resumption of AMRAD 10-GHz microwave activity which will probably resume in late June. We hope to have time to start work on narrow-band (SSB) 10-GHz equipment, in preparation for the ARRL 10-GHz contest in August and September. The same equipment should also be useable on 3456 and 5760. Anyone with an interest in 10-GHz is invited to contact AMRAD.

AMRAD is always looking for new members, especially those interested in technical matters. AMRAD welcomes the infusion of new areas.

We continue to meet Saturdays at 1230 hrs. at Taco Rio Grande in Vienna; our monthly meetings (technical talks) are the 2nd Thursday of the month, at the McLean Dolly Madison Library. All are welcome! Talk-in on the AMRAD repeater.

de Dave, N4JGQ

## **Woodbridge Wireless, Inc**

- Meetings: 2nd Tuesday of each month, at 7:30 p.m., Canteberry Woods
- Repeater: WB4FQR/R 147.84/24 and 449.9/444.9 - WB4GJZ/R 223.18/78
- Nets: Mondays, 8:00 p.m. local (0100 UTC) 147.84/24, 223.18/224/78 - (the repeaters are linked for the net.) - Wednesdays, Slow CW at 8:00 p.m., 21.164 MHz - Saturdays 9:00 p.m. - in new 10 Meter Novice band 28.460 MHz SSB
- Mailing Address: P.O. Box 112, Woodbridge, VA 22194

By the time this is printed, Field Day will be a memory. This year the WWI is to set up at the County Building Complex near Prince William Stadium. Failing that, we'll be at the old Bus Barn site on Horner Road. Again the club will field up to 10 transmitters replete with towers, beams and all the comforts one can bring on wheels. Its always amazing that stations rivalling a good permanent location can be set up and taken down in 24 hours. As always, the WWI aim is to have fun, score high and be safe.

Rabbit hunting is gaining favor as a WWI summertime activity. Some have begun building the direction finding device published in a recent QST article. A check of past hunts shows that the average rabbit (hidden transmitter) prefers wooded areas. Hunters have required anywhere from 42 minutes to 2 hours, 35 minutes.

*Continued on next page*



# Antietam Radio Association

## W3CWC

- Meeting: First and third Tuesdays of each month at 8:00 p.m. at the Civil Defense Center, Washington County Courthouse, Hagerstown, Maryland
- Nets: Tuesdays, 7:00 p.m. 146.940/340 MHz FM Wednesdays, 7:00 p.m. 447.975/442.975 MHz FM Thursdays, 7:00 p.m. 147.090/690 MHz FM
- Mailing: Antietam Radio Association, P.O. Box 52, Hagerston, MD 21741

The 1993 Great Hagerstown Hamfest is history and the club is already talking about having another in 94. First the club is looking towards the 1993 Maryland DC QSO Party and also Field Day which may be over as you read this.

The 1993 QSO Party is August 14th and 15th. We hope Auto-Call will have the full rules as the party nears.

We wanted to take a moment to acknowledge the prize winners at the Hagerstown Hamfest.

### Major Prize Winners

Hy-gain 3 Element 10 Meter Beam W. Small of Frederick MD.

Alinco DJ 162T 2 Meter H.T. W3IUT Edwin Hagelberg Hagerstown

Avenger 9 Home Security System Albert Treadwell Freeland MD

Alinco DJ 180T 2 Meter H.T. N8LNW Donald Crites II Old Field WV

Yaesu PT 2400H 2 Meter Mobile A. dejonge Gaithersburg MD

### Winners of Hourly Prizes

ARRL Antenna Book K30MN, Car Alarm System Michael Scott Dale Cty, Callbook Set N3NVT Worldradio Sub. KB3ADV, Nat. Scanning Rpt. Sub Eleanor Thompson Linthicum MD, Magnavox Portable Shortwave Receiver-N3IRO Foundation Representative!

Radio Sheet Books KA3SLE, MFJ 1750 Ground Plane Andy Rockwell (WV), Pro-AM Mobile Ant. B L Ravenscroft of Midland MD, Radio Sheet Books N3NRR Callbook Set Ken Holdridge Inwood WV, Radio Sheet Books G.R. Sine Romney WV, ARRL Book Set WB3FTQ, National Scanning Report Subscription Ron Beeman Keyser WV, Radio Sheet Books Phillip McCoy Kensington MD & Gail Sherman Romney WV, ARRL Handbook Jo Ann Everett Frostburg MD, Call Book Set John Thompson of Knoxville MD, Transi-Trap Lightening Arrestor AA30 Westminster MD, Radio Sheet Books Sue Higgins KA3LVY Damascus MD, Callbook Set WA3AAT Williamsport MD & Bonnie Paulson of Hagerstown, Tiare Interference Book + ARRL World Grid Atlas Janet Holdridge Inwood WV, World Radio Subscription Ben Zarfes W3GES Wrightsville PA, One other Worldradio Subscription was awarded but the winner's name was not recorded.

The First Great Hagerstown Hamfest was a definite success. The vendors inside did a brisk business. The tailgate area was well received and had lots of activity. The Mountain ARC VEC conducted 26 exams and as you can see a lot of people came away prize winners.

*Continued on next page*

### Woodbridge - Continued from previous page

The club again supports the Dale City 4th of July parade, providing emergency communications along the approximately 2-mile route. This one is a regular event, too and WWI-ers have it down to a science. In the past 12 years of this writer's experience with the parade, only one emergency situation arose. This year we hope we will again not be needed.

Thanks to Bob, Loyd, Nikki and Rick for their support of rowing on the Occoquan. Through the season these hams ensure the safety of the young people who race on the reservoir.

Finally, WWI has been asked to assist the Boy Scouts to assemble and tear down stations for the Jamboree in August. This is a repeat of the 1989 effort. Its about like a Field Day effort, only the scouts do the operating.

That's it for now. Ground your antennas.

de WJ4M



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## Maryland Mobileers Amateur Radio Club

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- Meetings: The first Friday of every month at 7:30 p.m. The location is the Office of Emergency Management at Crownsville State Hospital. Talk in available on 146.805 Mhz or 449.125 Mhz.
- Repeaters: WA3PJQ 146.805 and 449.125 Mhz
- Weekly Net: Mondays on 146.805 at 8:30 p.m.
- Address: M.M.A.R.C. P.O. Box 935 Severn, Md. 21144-0935
- Information: 410-768-5967

### ARMED FORCES DAY

May 15th Just some wrap up notes on the Special Event Station onboard the U.S.S. Torsk. We had a total of more than 250 contacts, among which were three contacts with other submarines. A great time was had by all aboard and next year should be just as much fun, so put it on your calendar now.

### FUTURE EVENTS CALENDAR

**July Meeting... Swap Fest...** Bring some wonderful stuff and make room at home for more wonderful stuff!!

**August Meeting... Tech Night...** Help and testing gear will be available to check out equipment and advice on repair and maintenance.

**September Meeting... Propagation** (that's the funny stuff antennas do to the air around them)... WV1B will provide a stimulating and exciting talk on the how and why antennas do what they do.

Talk in is available and we like having company stop by, so don't be shy.

Hope to see you at the meetings.

73's, Bruce-N3BWF

## 43RD ANNUAL HAMFEST SHENANDOAH VALLEY AMATEUR RADIO CLUB

Post Office Box 139  
Winchester, VA 22601

Virginia (Berryville) - Sunday, August 1, 1993 :

The 43rd Annual Winchester Hamfest, sponsored by the Shenandoah Valley ARC, will be held at the Clarke County Ruritan Fairgrounds, Rte 7, two miles west of Berryville, from 6:00 AM to 3:00 PM. Gate admission is \$5.00; Children under 12 and wives free. Commercial exhibitors of radio and computers. Large shaded tailgate area. Plenty of parking.

Breakfast, Snack Bar, Barbecue Lunch and Women's activities. Talk-in on 146.22/82 and 146.52 simplex.

**For further information Contact:**

Irvin Barb at (703) 955-1745 or write SVARC, P.O. Box 139 Winchester, VA 22601

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### *Antietam - Continued from previous page*

Most of the attenders said they were impressed that the hamfest was held in such a huge, clean facility. (One of the men's rooms had room for 23 occupants at a time-Hi!

Thanks to all who made the Hagerstown Hamfest a going concern.

Field day plans call for activity again at the Potomac Edison Site in Hagerstown. A 40 meter superstation is planned with a 4 element beam and a little power. Sounds like fun!

The 1993 MD-DC QSO party is different this year with the change in the top individual prizes to a limited edition MD-DC QSO Party LOGO WATCH being awarded to the top individual MD-DC Score and to the top Non MD-DC Score. These are nice prizes and certificates which will be awarded to the lucky winner. Amateur Radio of Hagerstown plans to donate a plaque to the high scoring MD-DC Club Score again this year!

73 Page WA3EOP



## Herndon Repeater Group

- Meetings: On-the-air meetings every Monday at 9:00 p.m.
- Repeater: N4FSC/R 144.71/145.31 MHz
- Packet BBS: 145.03 MHz (BBSHRG)
- Mailing: Herndon Repeater Group, P.O. Box 5073, Herndon, VA 22070
- Training: Michael Weber-WB8RDN (703) 450-2304
- Information: Michael Rosati-N4FXP (703) 481-8380

**FIELD DAY:** HRG will once again be participating in Field Day from the Group Campground area of the Lake Fairfax Park in Reston (near Rt. 7 and Rt. 606 behind the Reston Petting Zoo). Last year, HRG Field Day Chairman Bill N4WJN led the club to a nationwide EiLat Place finish in the 4A Battery category. This year Bill hopes to do even better (what's better than first place?). Everyone is welcome to participate in Field Day, please contact Bill N4WJN on the HRG 145.31 Mhz. repeater for details or call the HRG Information number listed above.

**TECHNICAL SEMINAR:** HRG's next Technical Seminar is scheduled for Sunday September 26 from 1:30 - 4:30PM at the Eastern Loudoun Regional Library in Sterling (Cascades). The topic will be "Radio Controlled Aircraft" hosted by Chris WA1ZXX. On November 21, another Technical Seminar called "Covert Hamming" will be hosted by Louis N4KWP. Louis will present various methods to remain on the air while under an aggressive Homeowners Association. Check into the Monday evening 9PM HRG Net on the HRG repeater for more details.

**YOUTH NET:** HRG's new weekly Youth Net meets on the HRG repeater on Sundays at 4PM. Josh KD4WGY (age 13) and David KD4YIJ (age 12) are the Net co-coordinators of this 16 and under Net. Licensed parents can assist their unlicensed son or daughter with Net check in procedures in hopes of sparking an interest in Ham Radio.

**EXAMS:** At the May 15 HRG sponsored ARRL/VEC exam session, the following new

licenses were earned, pass % rates are in ( ): 7 Tech, 1 Tech + and 1 General. Congratulations to HRG member Fred KD4TNR who upgraded to Tech +. HRG's next two exam sessions will be on August 28 and November 20.

**PACKET:** The new RESTON node is up and working from downtown Reston. The node, operating on 145.03 Mhz, is owned by Jack N4ULS and shares a site with Lee N4LXI's 443.0 Mhz repeater. Jack is interested in reports of how the Node is doing so leave him a message on the BBSHRG (N4WJN). The RESTON node was previously called VNA when it was located in Vienna. Also, the BBSHRG has just passed the 30,000 message milestone. Congrats to proud BBS papa, Bill N4WJN!

**NOVICE/TECH CLASS:** Planning for the third annual HRG Novice/Tech class (September 11 - November 20) is well underway. Flyers are being distributed throughout the area and any HRG member wishing to help out with flyer distribution or volunteer as an Instructor is encouraged to contact WB8RDN- in addition, HRG has submitted a formal paper for publication in the upcoming annual ARRL publication, "Proceedings of the 1993 ARRL National Education Workshop". This book is widely used by Ham Clubs who are sponsoring training classes in Amateur Radio, and should be available in August.

**NETCONTROL:** Thanks to recent Net Control Station volunteers Craig N4FSC, Bill N4YNI, Ken KD4UNS, Tom WB8ZRP, Norm KD4LTH and Terry AB4UM. HRG thanks Bill N4YNI who has offered to coordinate the Monday evening Net Control duties and recruit others for this function.

**CONGRATULATIONS:** HRG congratulates Louis Luh KQ4EY on being profiled on the front page of the spring edition of Handi-Ham World magazine, a nationwide publication of the Courage Handi-Ham organization. The article is a reprint (complete with his smiling picture) of the recent Autocall article about Lou that appeared a few months ago.

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## Anne Arundel Radio Club

- Meetings: 8 PM 1st and 3rd Thursdays, Davidsonville Family Recreation Center, Queen Anne Bridge & Wayson Roads off MD Rt. 214 near Annapolis.
- On The Air: 2030 Thursdays when there is no club meeting on 147.705/105. Tuesdays at 2030 local time on 28.410. The Chesapeake Weather & Traffic Net on 147.705/105 at 1100 and 1500 every weekend day and public holiday from April 1 to November 15. MSN (Maryland Slow Net) every evening at 1930 on 3.7170 Mhz. The Aviation Net on 147.075 every Monday evening at 8:30. The Packet Net every Wednesday at 9 PM on DCCONV Ch/13.
- Address: P.O. Box 308, Davidsonville, MD 21035
- Information: Margaret (Holly) Bevan, 410-923-0229

Weather Forecasting and Amateur Radio was the topic of the April 15th program meeting which was held at the National Weather Service office in Sterling, VA. Barbara McNaught, Warning Coordination Meteorologist, gave attendees a tour of the facility and an overview of the NWS interface with Amateur Radio. Also giving presentations were Dan Gropper/KC40CG, Skywarn Net Manager, Margie Currey/KA3PQP, AARC Weather Net Manager and Nancy Alley/NT3Z, ARES Coordinator for Anne Arundel County. It was a very interesting evening.

At the May 20th program meeting Club Members Glenn Biggerstaff/N3HUV and Dave Hubbard/WD4IEH presented a most interesting and informative program on creative ways to overcome space or community restrictions to outdoor HF antennas. They had a very attentive audience which produced a host of questions.

AARC members are very proud of Club Member Tony Young/WA3YLO who was chosen "Ham of the Year" for the ARRL Atlantic Division. He received VIP treatment at the Atlantic Division/New York State Convention held in Rochester, NY during the weekend of May 21-23.

The AARC Aviation Net celebrated its 1st anniversary on Monday evening June 7th with a lively on-the-air discussion of flying.

Coordinator Bob Baltz/N3MNT, Dick McKelvie/KE3HQ, Pat/N3BYX and Neal/N3BYW Obert furnished communications for the SPCA Walk-for-the-Animals on May 16th.

Club member Jeff Katz/N3KZV is coordinating Cycle Across Maryland which will begin on July 25th. Over 1200 bike enthusiasts will leave from Cambridge, MD on a 325-mile road tour which will end up seven days later at Towson State University. Many volunteers will be needed to staff fifteen 8-hour positions daily for the week-long event. Anyone interested in volunteering please contact Holly Bevan/N3BMB at 410-923-0229 or Hayden Leon/N8MOY at 410-573-1773.

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*Herndon - Continued from previous page*

**CONGRATULATIONS:** HRG congratulates Linda KD4WGW and Tim Duke KD4WGT on the birth of their first child on March 29. They named their new son Corey Alexander. This information was listed in error in a previous Autocall.

**ETHEL:** HRG would also like to add its thanks to outgoing Autocall editor Ethel K4LMB who is turning over the reins to a new editor. Ethel has been a good friend and supporter of HRG and our activities and she is a true credit to Amateur Radio. Thanks Ethel for all your hard work!

Finally, thanks to HRG members WB8ZRP, KD4GSV, KD4SRX, KD4MTW, KD4TNR, N4FXP, N4FSC and KD4GSS who participated in the May 8 Sterling concrete & squirrel extravaganza! All did a fine job!

73 Mike WB8RDN



# Metrovision Amateur TV Club

## FAST SCAN-COLOR-ATV

- Meetings: Quarterly: Call for next meeting time and place Repeater: WA9GVK/4 (video and audio) 425-431 MHz in; 438-444 MHz out. Also accessible on 144.970 simplex audio.
- On-the-air: Sun-days(ATVNet)at8:00P.M. Wednesdays (Ragchew) at 8:00 P. M.
- Mailing: Metrovision, Inc., P.O. Box 8231, Falls Church, Va., 22041
- Information: Sam - N3GHY (301) 630-3373 or Dick - WB3EPX (301) 439-8135

We would like to thank KA4CKI-Jim for his kind offer to let Metrovision have the annual club picnic at his QTH. We don't know for sure just when the picnic will be held, but we will let every one know when we decide on a date and time.

Metrovision plans to have a twentieth anniversary sometime this Fall. As this will be a special event, we want to plan this carefully so as to have a good celebration. More details on this event will come later. If, however, anyone has some suggestions, we will be glad to hear them.

KA4CKI-Jim has suggested the possibility of having a Metrovision ATV link down in the Woodbridge, Va. area. This would be an excellent opportunity to extend the capabilities of the the Metrovision ATV repeater. I will pass on more information on this as I receive it. So far, there has been favorable response to this idea.

Some of you have expressed an interest in being able to transmit computer VGA screens through your ATV transmitter. There are several pieces of hardware on the market which can accomplish this, Here in my QTH, I use a device called Televeyes which actually converts VGA data to composite video. Televeyes is available from Digital Vision 270-Bridge Street, Dedham, Ma. 02026 (617)329-5400. Anything on you computer

monitor can be sent to a standard television, vcr, or tv transmitter. A nice addition to your shack.

See you on ATV.

73 Dick , WB3EPX



John - KA4CKI, Sam - N3GHY, Bob - KC3VO  
Discuss some ideas at the last Metr Vision Meeting.

## *Anne Arundel - Continued from previous page*

At the clubhouse on May 8th Bob Israel/WC3I, Oscar Ramsey/NV 3G and Charlie Tiemeyer/W3RMD gave 20 exams to 12 persons. Nine tests were passed with three upgrades. Deal Alley/NS3V was the coordinator, Bob Baltz/N3MNT and Dick McKelvie/KE3HQ graded, John Prager/KB3AIK was the runner and Bettye Tiemeyer/K3VRZ and Holly Bevan, N3BMB registered.

Congratulations to the following persons who have upgraded: Holly Bevan/N3BMB to Extra; David Thwaites/N3AAR to Advanced; Marvin Conner/N3KHX and Rick Wilson/N3KRS to General. John Cutcher has changed his call from KE3FQ to AA3ED and William Cross from WA3LJP to AA3DI.

73, Holly/N3BMB



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## Mt. Vernon Amateur Radio Club

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- Meetings: Second Thursday of Each Month, 7:30 p.m. (exc. December) Mt. Vernon Governmental Center, 2511 Parkers Ln., Alexandria
- Repeater: WD4PDP/R 146.055 input 146.655 output
- Nets: Every Tuesday at 9:00 pm - Starts on 2-meter then moves to 10-meter on 28.405
- Information: John KI4HK (703) 780-2882 or Mike KE4ER (703) 780-8028
- Training Classes: John Forrest, WZ4A (703) 971-3905
- Mailing Address: c/o Frank Mackey, N4GUS, 8072 Athena St., Springfield, VA 22153

May's program was brought by Tom N4BV. It consisted of the video tape by Ten-Tec which provided a "tour," of their factory and their radios. THANK YOU, Tom, for obtaining and sharing the tape with us.

We had three young visitors in May - Tom W Nugent, Maurice Potter, and Geoffrey Brock. We appreciate your parents bringing you to our meeting and hope to see you again. WELCOME to four new members - Willie Steed K4PRL, Bob Lake KF2CQ, Paul Kravetz KD4WLP, and Bill Stewart (waiting for call!). Thanks for joining our club.

We are still testing on the second Saturday of every month at Lee District Park in Fairfax County. There is no charge and walk-in's are welcome. Preregistration (and information) is available by calling Frank N4GUS at 703-455-1510. Also call Frank if you are interested in being a VE or helping at the exams (you don't have to be a VE to help out).

THANK YOU Julie KD4WSZ (belatedly) for helping at the George Washington Parkway 15k run. I apologize for leaving you out promise I won't leave you out again!

Another item about Julie KD4WSZ - she has volunteered to take over the public relations job. From what I've seen so far, she's going to do a fantastic job. Thanks for coming forward, Julie!

**An MVARC History Tidbit** - I find a little information in the files about MVARC's field day participation over the years. The club was pretty small and so was our participation until about 1982. John Sweeney N6ANQ ran it that year and we were at Collingwood Park. We continued at Collingwood Park until 1986 or 1987 when we moved to our current location in Ft. Hunt Park. 1983's field day was run by Steve Bookout Nj4F, 1984 - George Farmer KX4W, and in 1985 - Bob White N4ENP and George Farmer KX4W worked together. 1986 was the first year Steve Schneider WB4EEA took over and Steve has been the boss every year since.

July's meeting will be on the 8th. It's summertime and the room is air conditioned - come on out!

Marci, KM4VM

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## Metropolitan Communications Network Radio Club, Inc.

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- Meetings: Quarterly, the second Sunday of the month, time & place to be announced.
- Repeater: N3AGB/R 52.250 Mhz in; 53.250 Mhz out. Accessible on 147.36 & 444.25 On The Air: Saturdays at 20:00 hours, Local Time.
- Mailing: Bob Sporn, 9927 Cottrell Terr., Silver Spring, MD 20903
- Information: Bob Sporn (301) 434-1719

Several of our members were out of town on business. However the nets have been functioning.

**THE SUNDAY MORNING COFFEE NET  
(50.4 Mhz) AT 9:00 HOURS LOCAL TIME.**

*Continued on next page*



# AMSAT

## The Radio Amateur Satellite Corporation

- Meetings: Semi-Annual - January and July
- Local Net: Sunday at 9:00 p.m. on 146.835 MHz. FM, W3ZM/R, Greenbelt, MD
- Information: Pat Kilroy - WD8LAQ (301) 249-3396 or on packet WD8LAQ@WB3V.MD

June was quite a busy and eventful month.

The launch of OSCAR ARSENE was essentially textbook perfect. Mode L users of AO-13 are holding their breath hoping that all is not lost with the Mode L transmitter section that is currently QRT.

SAREX general QSO opportunities with the space shuttle crew and packet radio robot were pretty slim but AMSAT V.P. For Manned Space Operations, Frank Bauer-KA3HDO, is looking into the reasons for this and will provide further insights soon.

The outline for our next semiannual local AMSAT meeting was completed. The first flier announcing the meeting has been released to the public (see within this issue and via packet radio bulletin under AMSAT@MDCBBS). The meeting agenda will be released on July 3.

Our SPARTAN "balloon class" experiment opportunity is gaining steam (see last month in this column). And preparing for and pulling off ARRL Field Day was exhausting yet a highly rewarding experience.

The rules for the 1993 AMSAT Field Day competition were released via AMSAT News Service bulletin number 156.03 dated June 5. Although satellite digipeater contacts are not being allowed for contest points in the AMSAT competition, "FD Greetings file" downloads from the digital transponders are allowed and highly encouraged. The special rules for the satellites are the same as last year's with only slight modifications.

This is the time of year to work on your antenna farm. Play it safe!

See you at our monthly AMSAT luncheon! See the details in the Auto-Call "Hungary Hams" section or ask about it on our weekly net!

73, Pat Kilroy-WD8LAQ



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### *Metro-Comm - Continued from previous page*

Joe Saunders, K3UAL, when not on Coast Guard Duty, was operating marine mobile on 40 and on two meters. David Gearhart, WA4GVT of Huntingtown, Md. reaches our net frequently from his 70-foot tower. Kenneth J. McCue, K3UQQ checks in from Ellicott City. Although band conditions have not been favorable of late, we still reach from North to South.

**MARYLAND FREE STATE SIX METER  
SIDEBAND NET (50.125 MHZ) AT 20:00  
HOURS LOCAL TIME.**

WA2VJH Lee of Sterling Virginia, and Richard WK3I of Fort Washington have been checking in, we miss some of the stations we used to receive from Pennsylvania and other states, due no doubt, to the current unfavorable conditions, Arnold Shostack of Falls Church, Va. - W4RWJ is a new check-in.

Let us hear from you.

73 Bob WA3GGO



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## Shenandoah Valley Amateur Radio Club

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- Meetings: The First and Third Friday of each month at 7:30 PM
- Place: The Collins Building 2129 Grace St Winchester Va
- Repeater: 146.22/82
- Net-SVEN: 146.22/82 Each Evening at 7:15 PM
- Address: P.O. Box 139, Winchester, VA 22601
- Information: Mike Baptist N4NVF 662-7633

It seems as though we are Into the Hamfest season with one in the area just about every weekend. I attended the Hagerstown affair last weekend and had a delightful time meeting friends and looking at the usual things in the tailgate area. I was impressed with the professional way the Hagerstown group planned and executed the affair. There was no parking problems the buildings and rest rooms were clean. A job well done indeed.

After a long winter and putting off projects we had a dual work party recently. One group of about seven spent the day working on the emergency van while another group worked at the clubhouse installing drainage pipes and other things. Thanks go out to all who helped on the work parties.

I am told that SEAN WD4RPV is working preparing for Field Day We will be setting up in Jim Barnett Park at this time I have very few details of what Sean has planned.

Just to make things interesting on the morning of Field Day we will be supporting the Loudoun Mile a local event to help the Salvation Army. We will also have a booth on the Winchester mall to promote Amateur Radio.

There is in progress a Training class at the SVARC clubhouse each Saturday. Guy W4PSJ Allen WA2RPX and Mark WD4HRI are the instructors. When the classes are concluded a team

of VE examiners will conduct tests. We are looking forward to some new calls in the area.

73 Walt WA4HVV

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## Laurel Amateur Radio Club

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### A Volunteer Examiner Coordinator

- Meetings: 4th Wednesday of each month (except November & December) 7:30 p.m. at the Laurel armory, Murphy and Anderson Community Center on the corner of 5th and Montgomery Streets, Laurel, Maryland
- Social: 2nd Wednesday of each month except December (Call for directions)
- Nets: 1st & 3rd & 5th Wednesdays, 8:30 p.m. on 147.225 + , No tones
- Mail: P.O. Box 3039, Laurel, MD 20709-0039
- Exams: 3rd Saturday of each month, 10:00 a.m. at Maryland Radio Center
- Information: Jim-WI3N (301) 725-6829 or Pud-W3DQI (301) 498-6293

The Laurel ARC was very pleased to have Tony/WA3YLO stop by and visit our meeting in April. While we're always happy to see Tony, this visit was especially exciting because because he was the bearer of good news from the Foundation for Amateur Radio. He announced that the board had voted to make a donation to Laurel ARC in recognition of the free exams our Volunteer Examiner teens have been providing at the F.A.R.Fest at Gaithersburg. The Laurel ARC is one of the eighteen VEC's in the country and was ranked by W5YI recently as the sixth in the nation in terms of volume. The Laurel ARC is one of the last VEC's to provide free exams, and we hope to be able to continue to do so. The donation by F.A.R. will help us toward that goal.

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## Prince George's Wireless Assn.

- Meeting: First working Tuesday of each month, 7:30 p.m., American Red Cross Service Building, 6206 Belcrest Road, Hyattsville, MD 20782
- Club Station: K3CEZ
- Mailing: 4109 Kennedy Street, Hyattsville, MD 20781
- Information: Frank Holton - WA3ZMW (301) 927-1245

PGWA held it's regular monthly meeting on June 1, 1993. Frank WA3ZMW presiding. A report of the club's participation in the Annual Crop Walk for hunger throughout the world, was given by Dan-W3SWD. PGWA acted as communicators on Sunday, May 16, 1993 for this event from the grounds of the First United Methodist Church in Hyattsville. There were a few hundred participants including adults and children.

There were three walking and jogging routes, a 3K quickie, a 5K residential and a 11K regular route. Mike McRae and Rick Schrader finished together in the 11K in just about 58 minutes. John Bartoli finished first in the 5K route.

The Church ladies had cookies, cake, orange slices and orange juice for all the participants and workers. PGWA members were stationed with portable 2 Meter hand helds and mobile rigs at strategic points of the walking and jogging routes. We are happy to report that there were no mishaps or casualties. Dan-W3SWD acted as net control station using the PGWA station call sign-K3CEZ. Thanks to the following members for volunteering: Dan-W3SWD, Frank-WA3ZMW, Charlie-KA3COT, John-WB3FUL, Ken-N3HLY and to Jim Reiner and his friend Chris Schallhorn for helping.

Frank-WA3ZMW has been making our meetings more interesting with video tapes from the ARRL showing Amateur Radio activities throughout the world. The latest one was titled "Terrible Tuesday and the Hurricane!". Frank makes up announcements on his computer and

copying machine and mails them to all the members before each monthly meeting. Very unique and thoughtful since WA3ZMW is an octogenarian. We welcome new members the first tuesday of each month. Please come.

73's Ken Easton, N3HLY



### *Laurel ARC - Continued from previous page*

Two of the major public service events are now behind us, the Montpelier Festival and the Main Street Festival. At the Montpelier Festival, we set up our booth with an HF station and did our thing shadowing key people throughout the event. We worked a number of stations and Michele/WK3X made up a nice certificate to send out.

The following week we set up our booth at the Main Street Festival. From there we had a net control station and served as the Information Booth. Everything went smoothly as our members helped organize the parade, shadowed key people, and had a person with the police to relay requests for assistance. It was estimated that the Main Street Festival is the third largest attended event of its kind in the US, drawing over the course of the day approximately 160,000 people.

The club is looking forward to Field Day and will be setting up at our usual location by Rocky Gorge Dam. Anyone interested in finding out more about us is welcome to drop by our social or business meeting or come by at Field Day.

73 de Jim, WI3N



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## Green Mountain Repeater Assn.

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- Meetings: Board of Directors, Last Moiday of each Month.
- Repeaters: KD3VR-146.61(Che4erly) K3GXF-146.88(Greenbelt)
- Luncheon: First Saturday of each month at the Fountain Cafe, in the Laurel Shopping Center Mall, U.S. Rt.1 (Baltimore Ave.) and Cherry Lane, Starts at 11:30AM.
- Mailing: GMRA, P.O.Box 429, Riverdale, Md. 20737
- Information: Boyd Nelson - KZ3Z (301) 434-0934

GMRA members, armed with HT's, attacked "Cheverly Day" celebration with real enthusiasm. The town of Cheverly, MD was founded in 1901 AD. All of this took place on Saturday, May 15th 1993 beginning as early as 7:00 a.m. GMRA members, totaling as many as 13, acted as communicators, on 146.38 repeater and also on simplex between the committee for Cheverly Day and the Cheverly Police Department.

H.D.,-N3LFL helped to set up the communication command center with his well equipped mobile rigs and antenna system. H.D. was Net Control and acted as liason between town committee, Police ond members in executing all the activities and many of the other members put in a 15 1/2 hour day.

One of the busy places was the main entrance to the town where only cars with special privileges and passes, such as participants in the events and vendors who were screened to pass. There was a 4K walk and an 8K run and many of those participants showed up around 7:00 a.m.

There was a lot of fun for all, including a throw the ball dunk tank with the Mayor and some of the Council members as the "Dunkees". There was a make your own Sundae ice cream stand, fast food stands including soft drinks. All of this was topped off by the fantastic fireworks display at the end of the evening.

The town and the Committees putting on the event were well pleased with this being the first year for Amateur Radio Communications, thanks to GMRA and all the volunteer operators. There was also mentioned the fine security measures by the communicators around the firework area. There were no mishaps reported. Once again, thanks to H.D.- N3LFL, for spearheading communications and to all the following volunteers for a 15 1/2 hour day.

Joe-KD3VR, Alice-WB3AOA, J.P.-N3KHP, Murray- K3BEQ, John-N5SJZ, Debbie-N5SKA, Larry-AA3BD, Paul-W3HFA, Todd-N3NYH, James-N3KNA, Dan-KA8YPY. Don't forget the first Saturday of each month at the Fountain Cafe in the Laurel Shopping Center for the lunch get together- GMRA is looking for new members to join our Repeater Assn. Contact Boyd-KZ3Z at (301) 434-0934.

73,s Ken Easton, N3HLY

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## Culpeper Amateur Radio Association

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- Meetings: Third Monday of each Month, 7:30 p.m., Culpeper County Courthouse, Supr. meeting room. Culpeper, VA
- Repeaters: Voice: AA4VI 147.12 Packet Node 145.79 (IPEPER) Packet BBS 145.79 (CULBBS)
- Nets: Tues. and Thurs. 8 p.m. 147.12
- Information: Gary, (703)-854-6187

Mother's Day turned out to be rather eventful for our president, Gary, W0QDP. After hosting guests during the day he was called that evening to assist in a search for the daughter of the guests who had joined a group hiking up "Old Rag Mountain" located in the Blue Ridge west of Culpeper.

Five of the hikers had strayed and ended up spending the night on the mountain. Search and Rescue found the five the next morning, all OK but hungry.

*Continued on next page*



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## Maryland Emergency Phone Net

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- Meetings: Nightly, 1800 Local, 3920 KHz
- Directors: K3ONU, KD3JK, NF3X, WA3YLO (Alternate)
- Manager: KK3F
- Secretary: N3EI
- Treasurer: KC3ZJ
- FAR Representatives: KC3ZJ, WA3FYZ

Picnic time is near! Don't forget the annual MEPN picnic, July 11, hosted again this year by WA3YLO at the Anne Arundel club's Davidsonville site (same place as last year). Grills are available for warming food, and Tony will probably give us a tour of the AARC club shack. This is a good chance for members (and non-MEPN operators) to get together and put a face on that voice. Hope to see you there on JULY 11!

Last time I posed the following questions: "What do the following frequencies have in common: 3.700, 7.125, 10.125, 28.200? Easy. Now, which frequency does not belong in that list (for another reason, naturally)?" I received one correct answer from WA1QAA, Mike, who said that all frequencies are exactly in the middle of a CW (sub-)band. And further, he observed that 10.125 was a frequency band where novices were excluded.

Well, that is correct. BUT, I had another answer in mind. Unfortunately, I didn't state the question well enough (these midnight runs to the computer to meet the AUTOCALL deadline play havoc with good logic). Anyway, 28.200 is the proper answer if you think of power output, general class or above. 200 watts is the power limit for EVERYONE on the 80, 40, and 30 meter CW frequencies listed, but this limit does NOT apply to general class and above on the ten meter frequency. (I know you-all knew that.)

As you will probably read elsewhere in this issue the F.A.R.FEST at Gaithersburg is scheduled for Sunday, September 12. That will also be the time for the next MEPN gathering; mark it on your calendar now! We have a place chiseled out in one

of the closed in cow barns, and historically, I think, it is usually the largest MEPN gathering of the year.

Summertime is here, and the net is getting noisy from QRN. We welcome any help we can get at this time of year. Give us a shout at 1800 local, and see how much fun it can be to handle a little traffic, and chat with your ham neighbors.

Hope to meet you soon .... at Davidsonville, and ... ON THE AIR.

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73, W3DQI/Pud

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**Don't Forget Our Deadline For Submissions To  
AUTO-CALL Is The 5th Of The Month Prior  
To The Month Of Publication.**

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*Culpeper - Continued from previous page*

Gary used his HT to monitor command traffic and to pass information to parents via the club repeater.

Club members AC4KP, WD4LHP and WD4OKD assisted county personnel again in this year's "Gypsy Moth" spray program. Helium balloons were placed to designate spray areas for the pilots of the spray planes.

AC4KP, Bill Brown and his VEC group held their latest test session June 11th, the next and final for this year will be Dec. 10th. Congratulations for a job well done.

Field Day this year was held at "Mountain Run Lake Park" just west of Culpeper. Very picturesque, good facilities and lot of tall trees good for antennas. We had a good turnout, lots of equipment and enough operators to keep it busy.

The net on Thursday night is conducted by Bob Segrest, KD4PWU solely for discussion of packet and related digital material. All are invited to check-in to our nets at any time.

73 Bud-WD4OKD



## "Ole Virginia Hams" Amateur Radio Club

- Meetings: Third Monday of each month at 8:00 p.m., Northern Virginia Co-op Building, 10323 Lomond Drive, Manassas, VA
- Repeaters: Voice: WA4FPM 146.97 and 224.66, Packet Node: 145.030 and 223.540 (OVH) Packet BBS: 145.030 (BBSHRG)
- Net: Each Thursday, 8:00 p.m., 146.97 and 224.66
- Information: Harry Vorhauer-W4PVA (703) 368-6050, Steve Frick-N4OGR (703) 361-0008
- Mail Address: Ole Virginia Hams ARC, P.O. Box 1255, Manassas, VA 22110

### HAMFEST

The Manassas Hamfest and Computer Show on June 6 was a blast! We could not have asked for better weather to feather the cap of more than six months of intense and active preparation by the OVH Hamfest Committee: dry, sunny, breezy, dry, not too hot, and dry.

Even so, the task of setting up the fairgrounds, helping hundreds of commercial and tailgate exhibitors get settled, conducting the event, and cleaning up afterwards, all within 22 continuous hours, was an arduous one.

It required the best of each of the participating OVH members, many of whom went with little or no sleep and all of whom performed with spectacular industry and efficiency.

Once we recover and have finished patting each other on our backs, we would like to extend our gratitude to the many other organizations for making this year's hamfest a resounding success: to Boy Scout Troops 884 and 1195, for directing acres of traffic and carting mountains of trash; to the Park West Lion's Club, for feeding and watering throngs of people; to the Prince William County Police, for ensuring personal and traffic safety and security; to the Lake Jackson Volunteer Fire Dept Rescue Squad, for ensuring health; to the ARRL, ARES, NVFMA, FAR, and QSL

Bureau, for ensuring education; and to the commercial and tailgate exhibitors, for ensuring the ready availability of hundreds of thousands of toys.

Last, and certainly not least, we thank Ed Barnes, Operations Manager of the Prince William County Fairgrounds, who kept us out of trouble and who had the kindness to relieve us as we gasped our last breath waiting for the final, tiny handful of struggling tailgaters to pack their wares.

Ed, you will get that ticket if it's the last thing we do.

So, it is not too many months before we must begin the process again. We can't wait. We hope you all enjoyed the hamfest as much as we, and we hope to see you all again next year!

DAN-KC4EWT

### PACKET

Special thanks go to Gene-KD4RHC for the donation of numerous 12 volt, 12 AmpHour Gel cell batteries. Through the sale of these batteries the club was able to purchase a new Diamond 220Mhz antenna and a new Icom IC38 220Mhz rig for the OVH node. The rig will replace a tired Midland of 1977 vintage. The new antenna was mounted on June 8 and the rig will be in place as soon as it arrives from the supplier.

### NEW MEMBERS

Welcome to Tommy-KD4VNI, Mike-no call as yet, and Steve-no call as yet who are to be voted in at the June OVH meeting. At the May meeting OVH voted in new member Steven, who passed his Technician exam and is awaiting his call. Congratulations goes to Ivan-KD4DFD who recently upgraded to General class.

Alan-KD4KBX



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## Widow's Assistance Program

The Foundation's Widow's Assistance Program has been in operation for many years and has accomplished a great deal for the families of our Silent Keys. The program offers to help widows (and other family members) evaluate and dispose of radio equipment in an Amateur's estate. Listings of Estate Sales are carried in the Shack Sales of Auto-Call magazine free of charge, and major items may be offered for sale at local hamfests, etc. No fee or commission is charged the families.

One other option that should be considered is donating equipment to a club and taking a tax write-off for the charitable contribution. The Widow's Assistance Program can help you find a club that will make good use of the equipment. Some commercial operations are also willing to purchase the complete list of equipment and clear everything out at once. This may be the quickest solution in disposing of an estate.

Every ham is encouraged to maintain a list of his/her radio equipment, with realistic evaluations, and instructions on the disposition of any specific items you would like to have go to a special person or organization. Keep your family advised of your wishes.

For more information about the Widow's Assistance Program contact any local Foundation member club or call (301) 262-1917.

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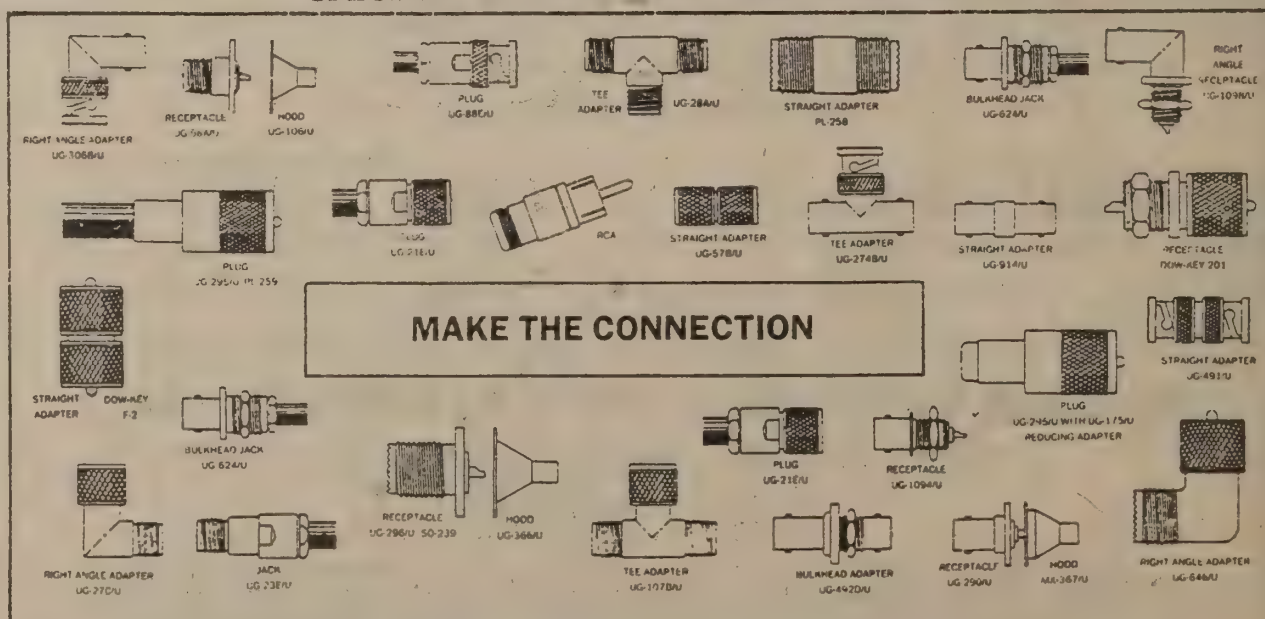
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Pasadena, MD 21122  
(410) 437-6258

Copy must be received by the 5th of the month prior to the month of publication.

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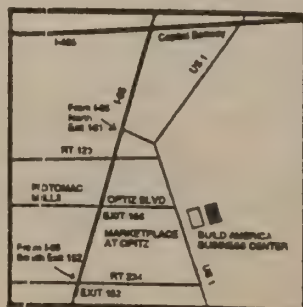
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**AMSAT**

The Radio Amateur Satellite Corporation  
Local Chapter

Semi-Annual Meeting Announcement  
Washington, DC

Saturday, July 17, 1993  
1 p.m. - 4 p.m. EDT

Intelsat Headquarters Building  
Lobby Area  
3400 International Drive, NW  
Washington, DC

Hosts:

Ken Nichols, KD3VK  
H: (301) 977-5405 after 7 p.m.  
W: (202) 944-7181 anytime

Pat Kilroy, WD8LAQ  
H: (301) 249-3396 before 9 p.m.  
W: (301) 731-8695 anytime

No pre-registration required to attend

Format: All topics relate to Amateur Radio and the Amateur Space program. The format will be a healthy combination of presentations and informal "Show 'N' Tell" demonstrations. There are still openings for your talk or demo. Suggestions are welcomed too. Advanced registration with Pat Kilroy is required for each presentation or demonstration. An agenda will be released on July 3 via packet radio, AMSAT@MDCBBS.

Please spread this information through your club Newsletter, at Hamfests, and on your Club Net.

Directions: The Intelsat building is on the southwest corner of Connecticut Avenue and Van Ness Street NW in Washington, DC., across from the Van Ness/UDC Metro station on the Red Line. Do NOT enter Intelsat from Connecticut Ave. From the Connecticut Ave and Van Ness St. intersection, walk one block west on Van Ness, turn south on International Dr. and continue about 500 feet to the Intelsat lobby entrance at 3400 International Drive. Park as posted on Connecticut Ave or Van Ness St., or in any of the nearby parking garages.

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# AUTO-CALL POLICY

## PRODUCTION POLICY

Copy for Auto-Call will be accepted in any form - handwritten, typed, compatible computer disk or modem. All hard copy is reformatted to preserve uniformity of style in the magazine. We use Word Perfect 5.1 for Windows for word processing, Ventura Publisher for page layout and CorelDRAW 3.0 - CD-ROM for Graphic Design. We also use a Full Page Scanner with WordScan OCR to scan text and graphic's directly into Ventura Publisher. Photo Styler is used to enhance and halftone images. We will accept 5.25" or 3.5" MS-DOS diskettes is ASCII format. Type all headers, bylines and body text flush left with no margins. Single space after periods, do not indent paragraphs and double space to begin new paragraph. If you have any questions please feel free to contact: Doug Allen - (410) 437-6258.

In determining space requirements, figure about 700 words per page (50 lines at 12 words per line) - not including the space taken up by headings, photographs, etc. Either black and white or color photos can be used as long as the contrast is good. Master copy, which is to be reproduced directly, should be in black ink on white paper and should be in proper page ratio, (Copy space is 7" wide by 9" high). Copy can be reduced or enlarged as necessary.

## SHACK SALES

Deadline for copy is the 5th of the month preceding the publication date. Shack sales will NOT be accepted over the telephone. Full address must be provided for our reference but need not be published. Each ad must include the full name of the advertiser. If the full address is not included, we prefer to include the city along with the telephone number so that readers will know whether a long distance charge is involved. The entire telephone number - including city and state - is counted as only one word. We do not count postal zip codes. Otherwise, each word, abbreviation, model number or group of letter/numbers is counted as one word. Remittance must accompany each ad.

See next column for additional information on advertising. For further information, please phone the Auto-Call editor at (410) 437-6258, Pasadena, MD.

## ADVERTISING

### SHACK SALES

Non-commercial advertising of Amateur associated equipment is available to subscribers of Auto-Call at 3¢ per word - with a \$1.00 minimum. Commercial vendors and non-subscribers rate is 17¢ per word - with a \$5.50 minimum.

Special headings or special spacing may be used (e.g., one item per line) but such ads are charged at a column inch rate - \$1.00 per column inch for non-commercial ads, \$5.50 per inch for commercial vendors and nonsubscribers

Commercial vendors should include the ad size and length of run (e.g., 1 year, 6 times, etc.) on company letterhead and it must be signed by the person authorizing payment for the ad. Full name and address must be provided with each ad but need not be published. No ads will be accepted over the telephone. Since no effort is made to investigate advertisers, no warranty can be implied.

### DISPLAY ADS

DISPLAY ADS are "boxed" and may contain artwork or photographs. They may be placed along with the shack sales or displayed in other sections of the magazine. Requests for specific locations will be honored if practical but cannot be guaranteed.

Display ads are charged according to size and duration of run as shown below. All advertising must be prepaid for at least the current month.

		Rates per Issue			
Page	Col.inch	1 Year	6 Times	3 Times	1 Time
Full	18	\$75.00	\$90.00	\$100.00	\$105.00
1/2	9	55.00	65.00	71.00	75.00
1/3	6	40.00	46.00	51.00	54.00
1/4	4½	33.00	38.00	41.00	43.00
1/6	3	22.00	26.00	28.00	30.00
1/8	2¼	17.00	20.00	22.00	23.00
1/9	2	16.00	19.00	21.00	22.00
1/18	1	8.50	10.00	11.00	11.50

Based on camera-ready copy

Extra charge for halftoning photos  
and for in-house artwork and layout.

Copy must be received by the 5th of the month preceding publication date.

(e.g., Copy for November issue must be received by 5th October)

**All Advertising Must be Pre-paid**





# JOIN ARRL

## BENEFITS FOR YOU

QST, QSL Bureau Awards, Low Cost Insurance, Operating Aids,  
Government Liaison and More - Much More!

### MEMBERSHIP APPLICATION

NAME \_\_\_\_\_ CALL \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_ PROV./STATE \_\_\_\_\_ PC/ZIP \_\_\_\_\_

\$30 in U.S. \$42 elsewhere (U.S. funds) Licensed amateurs or age 65 and over, upon submitting proof of age, may request special dues rate of \$24 in the U.S. \$36 elsewhere in U.S. funds. Persons age 17 and younger may qualify for special rates, write for application.

For postal purposes, fifty percent of dues is allocated to QST, the balance for

VISA, MC, AMEX, DISCOVER # \_\_\_\_\_

Signature \_\_\_\_\_ Expires \_\_\_\_\_

**The American Radio Relay League**  
**225 Main St.**  
**Newington, CT. 06111 USA**

AUTO-CALL

Atlantic Division Director  
Hugh Turnbull, W3ABC  
6903 Rhode Island Avenue  
College Park, MD 20740  
Phone: (301) 927-1797

Roanoke Division Director  
John Kanode, N4MM  
Rt. 1, Box 73-A  
Boyce, VA 22620  
Phone: (703) 837-1340

## AUTO-CALL Magazine

P.O. Box 7612

Falls Church, VA 22040

Please enter my NEW \_\_\_\_\_ RENEWAL \_\_\_\_\_ GIFT \_\_\_\_\_ subscription to Auto-Call

For 1 Year \_\_\_\_\_ 2 Years \_\_\_\_\_

Subscription rate: \$8.00 per year.

(Sample Copy of latest issue \$1.00)  
will be applied to subscription

NAME \_\_\_\_\_ CALL \_\_\_\_\_


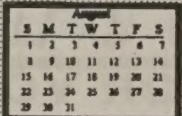
ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**Make check payable to the Foundation For Amateur Radio**



# JULY 1993

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
 				<u>1</u> Anne Arundel Summit Voice of America	<u>2</u> Mobileers SEES Shennandoah	<u>3</u> Green Mtn. Stafford
<u>4</u>	<u>5</u> Adams County Dept. of State	<u>6</u> Antietam IBM PG Wireless	<u>7</u> BARC MARC	<u>8</u> AMRAD MADRAS Mt. Vernon N. Virginia QCWA 150	<u>9</u> Alexandria SMARC Vienna	<u>10</u> Stafford
<u>11</u> (MetroCom) 3/6/9/12 EXAMS	<u>12</u> (9 thru (PVRG) 5/6/7/8 vary) Carroll County	<u>13</u> Fauquier Frederick Leisure World Woodbridge	<u>14</u> ***FAR*** Pentagon S. Patuxent	<u>15</u> Anne Arundel QCWA #20	<u>16</u> Rock Creek Shennandoah	<u>17</u> Capitol City Stafford
<u>18</u>	<u>19</u> Culpeper Ole VA Hams Sterling Park	<u>20</u> (BRATS) 4/6/8/10/12 Antietam Arlington	<u>21</u> (QCWA #137) 1/3/5/7/9/11 BARC Goddard MARC	<u>22</u> MADRAS St. Mary's	<u>23</u> Central MD Vienna	<u>24</u> (Last) Moose Stafford
<u>25</u> (Last) Adventists	<u>26</u>	<u>27</u> Columbia	<u>28</u> Laurel	<u>29</u> (Last) QCWA #20	<u>30</u>	<u>31</u>

NCDXA Net every Sunday 147.000 at 8:30 p.m.

Nonprofit Organization  
U.S. Postpaid  
Arlington, VA  
Permit 757

## AUTO-CALL

P.O. Box 7612  
Falls Church, VA 22040-7612

|||||  
93/09 02649  
ALFRED A LAUN III K3ZO  
PO BOX 31097  
TEMPLE HILLS MD 20757-0097

## ADDRESS CORRECTION REQUESTED